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The Differential Diagnosis of Ocular Pain

R. O. McDiarmid, M.D., Brandon, Man.

In this paper I wish to discuss briefly the differential diagnosis of some of the conditions which give pain in and around the eye, particularly from the viewpoint of the general practitioner. One should remember that often some of the most severe pains in the eye can be caused by extra-ocular conditions and conversely that severe pains in neighboring regions of the eye can be caused by a purely ocular condition. It should also be remembered that it is often found that conditions with slight pain or with pain of gradual onset are more serious from the point of view of loss of sight, and it is for this reason that they may be neglected or overlooked until such time as the loss of vision is beginning to affect the daily routine. When this stage is reached it is often possible to prevent further loss, but it is likely to be impossible to bring back the sight that has already been lost. This, of course, emphasizes the importance of an early diagnosis, and to any of you who do, or contemplate doing refractions, there is one extremely valuable point to be remembered. The vision in each eye separately should always, with correction, come to 20/20 or better, and if it does not there must be a reason and it would be well to look for it. True, sometimes, we find congenitally amblyopic eyes for which no reason can be found, but such cases are few and far between and should not interrupt one in the search for the causative factor. It may be of interest to note that with these congenitally amblyopic eyes, we often have a history of a very rapid labor and it is thought that the visual defect is due to damage to the optic radiations.

I think perhaps the best way of approaching the problem we have here is to discuss some of the more common conditions which cause pain in this region, the types of pain they cause, and their differential diagnosis.

Perhaps the most common condition which will cause an ache or pain in, or in the region of, the eye, is a refractive error, and the symptoms which will result from this are extremely numerous and variable. Generally speaking, though, the patient complains of discomfort which can be associated with such use of the eyes as prolonged close work, driving, watching moving pictures and the like. This discomfort may come on at the time or may not be noticed until several hours later or even the next morning. Commonly the patient complains of defective vision, of the eyes being

tired and aching, of frontal or occipital headaches, of blurring of print, of a feeling of sand or grit in the eyes, or of the eyes watering after a stretch of close work. These symptoms, it must be remembered, may also occur in a person with a perfectly normal refraction. One is frequently confronted with these patients and a careful history and examination will often disclose the presence of an undiagnosed anemia, or some other condition which reduces the general physical tone. The ocular symptoms are thus merely a portion of the complete picture. This is seen in tuberculosis sanatoria where the patients are debilitated, and accustomed to many hours of reading or sewing in a day. Naturally, when the eyes are being over-worked, one would expect to find the symptoms of eyestrain whether or not there is an actual error of refraction. I make it a practice to explain to these patients that if they walked all day their legs would bother them in the same way, particularly when they are in a run-down condition.

Primary acute glaucoma is one disease which is often mis-diagnosed. Typically there is a sudden onset of acute agonizing pain which is situated in the eye, and over the distribution of the 5th cranial nerve. This pain is due to the stretching of the sensory nerve ending of the eye, and is often referred to the skin and bones of the surrounding area. In the early stages there may be a slight congestion of the eye, with very little inflammation, and it could be diagnosed as neuralgia, acute frontal sinusitis or, as the condition advances, as iritis. The latter is the most common error that is made. In glaucoma we have pain with rapid loss of vision which, however, could be overlooked as the person may confine himself to a darkened room, and there is a tendency on account of the severity of the pain to close the affected eye. The pain of acute glaucoma is excruciating, and I have on more than one occasion seen an eye which has actually burst open through the sclera from the pressure. Also on examination in glaucoma there is the semi-dilated and immobile pupil which, particularly if the condition is unilateral, is difficult to confuse with anything else. On comparison of the two eyes one will find this pupillary change and also that the cornea of the affected eye will likely appear hazy on comparison with the other. In iritis the pain will be of more gradual onset and the pupil will most likely be contracted. Intra-ocular tension is, of course, elevated in glau-

coma and this can be recognized by a practiced finger. Ophthalmoscopic examination may be impossible because of the cloudiness of the cornea. Glaucoma is one condition where it is extremely important to make an early and a correct diagnosis, as the longer it persists the greater will be the eventual loss of vision. It is not at all uncommon to find patients who have suffered for two or three weeks from this pain, by which time the eye may be totally and permanently blind. In severe attacks of glaucoma the diffuse nature of the pain, and the fact that it is often so intense as to cause vomiting may lead one to mistake it for an attack of migraine.

There is one type of acute glaucoma, secondary in nature, which it might be well to mention here, and that is the acute rise in tension with pain which results from a neglected or undiscovered intra-ocular neoplasm. I refer particularly to melanotic sarcoma of the choroid. The history here as a rule is that the patient has lost the vision of one eye gradually a few weeks or months previously, and after a period of quiescence there is onset of pain in the eye, which gradually becomes intense, and the eye becomes injected. From the time that the tumor began to strip off the retina there has been a gradual increase in size with concomitant increase in pressure which eventually produces pain. Without a proper history and examination, including transillumination of the eye and ophthalmoscopic examination, this could be mistaken for an ordinary primary acute glaucoma and valuable time might be lost, a delay which would greatly endanger the patient's life. Melanotic sarcoma is a relatively rapidly metastasising tumor, spreading as a rule to the liver, and as soon as discovery is made the eye should, of course, be removed. It is often found that by the time pain is present metastases are already in the liver, and even with enucleation the patient dies a few months later.

Chronic glaucoma, although less distressing from the viewpoint of the actual pain experienced, is, nevertheless, more serious in view of the actual loss of vision which often occurs. Typically there is a gradual loss of sight, which may progress so slowly that the patient is unconscious or neglectful of it, thinking that it may be due to a change in refraction and so postponing help until much harm has been done. Also this type of case is more difficult to diagnose by the person not experienced in dealing with it. It is not an uncommon experience to see a patient, who gives a history of failing eyesight and has a pocket full of glasses, which he has gathered up in a fruitless endeavor to get some benefit. There is little or no pain, and this is why the visual failure is overlooked or thought unimportant. Once again, let me emphasize this fact that if the vision doesn't come to 20/20 then

beware; you may be dealing with a case of chronic glaucoma. The one condition with which it is most commonly confused is senile cataract, and serious results may follow if this mistake is made. The diagnosis, as a rule, would have to be made by an oculist who is experienced in examining the lens and the fundus (for cupping of the disc), in charting the visual fields and in measuring the intra-ocular tension. In external appearance the eye, at the time of examination, may appear perfectly normal, for in the beginning the patient's complaints are of transient attacks of dimness of vision. Between these attacks the eye shows no outward abnormality, although if the pupil response to light is elicited it may be found that the contraction is more tardy than usual. A history of haloes around the street lights at night is suggestive of glaucoma. This appearance is due to a change in the refractive properties of the cornea, the result of increase in pressure.

With acute iritis pain is a prominent symptom, although it is not likely to be as severe as in acute glaucoma, the condition with which iritis is most often confused. The pain is more in the nature of an ache, although it may be neuralgic in character, and is typically worse at night. I have already outlined the differential diagnosis of the two conditions, and only wish to emphasize again the importance of distinguishing between them, as the treatment of each is entirely different. Acute iritis is also easily mistaken for acute conjunctivitis. In this latter condition we do not have the severe pain and tenderness which characterize acute iritis, but rather an irritation or grittiness of the eyes; but perhaps the most distinguishing feature is that with iritis we have a contracted pupil which does not dilate when the light is removed, while in conjunctivitis the pupil reaction is normal. Again in conjunctivitis there is a purulent secretion or discharge, the type of which depends on the nature of the infecting organism, while in iritis the discharge is watery. Generally speaking, the redness of conjunctivitis fades as we near the cornea, but in iritis it is more marked in this position. Conjunctivitis is also more likely to be bilateral.

With chronic iritis and irido-cyclitis, whatever the cause, pain is not a marked symptom; neither is it in keratitis unless there is ulceration of the cornea. Here the pain is often similar to that due to the presence of a foreign body and is worse if the eyelids are allowed to open and close over the eye. It is due to irritation by the lids of exposed sensory nerve endings in the cornea. A somewhat similar irritation or pain is often due to the presence of small white concretions which form in the palpebral conjunctiva. Here the patient is able fairly accurately to localize the disturbance, and when the area is inspected one sees

the concretions. These are removed under local anesthetic by means of a sharp needle or knife.

There is one type of pain about which one is often consulted where no abnormality of the eye is found. It is often described as a severe neuralgic ache in or behind the eye, and at times is very distressing. This is a referred pain due to the presence of impacted or unirupted teeth, abscessed teeth, or teeth with large cavities in which the pulp is laid bare, and is caused by the spread of the pain over other branches of the fifth nerve. It could be confused with the pain associated with a refractive error, but the absence of any such error, together with the findings of x-ray examination of the teeth, will serve to facilitate the diagnosis. Moreover, this pain is not particularly related to use of the eyes. With tic douloureux or trigeminal neuralgia the lightning-like character of the pain, which is not imitated by any other disease, makes it difficult to confuse with either the above or any pain producing disease of the eye, such as glaucoma.

As the eye is surrounded, except laterally, by the accessory air sinuses, it is understandable that an acute inflammatory process in any of these might draw the patient's attention to the eyes, especially so as in such cases the eyes are often injected and the lids red and swollen. The pain of acute glaucoma may simulate acute sinusitis. However, examination of the eyes, including the percentage of vision together with a history of head-cold, the presence of nasal discharge, and tenderness over the affected sinus, and the appearance under transillumination or x-ray, will usually indicate the cause of the trouble. With regard to the tenderness on pressure, one must be careful that the finger is not pressing on the supra-orbital or infra-orbital nerves where these emerge from their respective foramina. One occasionally encounters a neuralgia of either of these nerves, and pressure upon them will elicit a painful response which might be, and often has been, confused with an acute antral or frontal sinusitis. However, in this neuralgia the pain and tenderness are more localized; in sinusitis they are more diffuse.

Herpes Zoster Ophthalmicus is the result of inflammation of the Gasserian ganglion and appears in the distribution of one or more branches of the ophthalmic division of the fifth cranial nerve. Characteristically there is severe pain in the area supplied by the involved nerves. This is followed by a vesicular eruption. The distribution is typically unilateral and ceases abruptly at the mid-line. It is important that the cornea be examined frequently during the course of the disease and measures taken to prevent its involvement. Examination may be made difficult by swelling of the lids and it may be necessary to use retractors. The preventive measures consist in keeping the pupil

dilated with homatropine, or with atropine if there is already involvement, and the use of oily drops or ointment to keep the lids from sticking together. The superficial nature of the pain and the exquisite tenderness of the skin make it difficult to confuse the condition with more deep-seated pain producing processes, such as acute sinusitis or glaucoma. Herpetic neuralgia is one of the most severe of all pains and it is aggravated by any contact with the skin or even by a draught of air.

The pain of migraine is difficult to confuse with that caused by any other disease. It is typically unilateral, is knife-like in character, retro-ocular in site, and of such severity as to totally incapacitate the patient. It is often accompanied by nausea and vomiting. Oculists are often consulted with regard to these headaches, partly because of the site of the pain and partly because they frequently seem to be aggravated by eyestrain or refractive errors. It is a fact, moreover, that occasionally correction of refractive errors will lead to diminution of the severity or frequency of the attacks. Migraine headaches occur at varying periodic intervals, are diffuse and one sided, and are often preceded by an aura which may take the form of blurring of the vision, perhaps of half a visual field. This passes off and shortly afterwards the seizure commences which may reach such an intensity that the patient vomits. If this occurs it may bring about the end of the attack, and the patient is well until the next bout commences some days, weeks, or months later. The fact that examination of the eye reveals no abnormality, in addition to the aforementioned chain of events, the periodicity and sometimes the history of an allergic ancestry, will tend to lead one to the correct diagnosis. The blurring of vision and the headache has been confused with the symptoms of a brain tumor, but in migraine there is no change in the fundus. I have already mentioned how acute glaucoma may be confused with migraine.

Acute retro-bulbar neuritis is as a rule unilateral. A history of dimness of vision with no obvious cause should suggest this possibility. There may be mild headache on the affected side and the eye may be tender to pressure. The best method to test this is to have the patient close the eyes, and with the hands on each cheek press gently on the eyes with the thumbs. Because of the inflammation of the nerve the affected eye will be more tender. Also if the patient is asked to look from one side to the other as far as he can, there will often be pain behind the affected eye due to the stretching of the optic nerve. It is easy to overlook this condition and attribute the symptoms to hysteria, and to convince oneself that perhaps the vision in this particular eye never was very good. However, if the pupil response to light is tested it will be found that, although the

pupil contracts, if the light is kept on it slowly dilates again. This is a very important diagnostic sign. The oculist as well will chart the field of vision for a central scotoma, examine the fundus for engorgement of the veins which may or may not be present. This engorgement when it is present is due to the swelling of the nerve partially obstructing the return venous flow of the central vein of the retina. One disease which this condition most closely simulates is chronic glaucoma, and here one must carefully question as to the possibility of haloes being present around the street-lights at night, also as to the rapidity of onset, chronic glaucoma being insidious and gradual while the loss of vision in acute retro-bulbar

neuritis is more rapid. Once again the oculist at an advantage. He can measure the tension, chart the fields of vision, and by examination of the pupil and the optic disc is able to eliminate definitely one or the other.

In this paper I have not felt it necessary to discuss the differential diagnosis of such conditions as blepharitis, chalazion, stye, or acute dacryocystitis which are sufficiently obvious. Neither have I dealt with the more uncommon conditions such as neoplasms, choroiditis, retinitis, and so on. The purpose has been to discuss some of the more important conditions which every practitioner is liable to encounter and to aid him in their recognition.

Control of Lead Poisoning

Glen F. Hamilton, M.D.

The following is a review of one year's "clinical control" of the lead hazard in a storage battery manufacturing plant.

During the year 1944, before the establishment of this "clinical control," fourteen workers in the plant were off work as compensation cases, and the number of man-days lost in this way was 546½. During 1945, the year under review, there were four workers incapacitated by lead intoxication. Two of these can scarcely be included because they appeared early in the first month of control. The other two cases were negligent, unco-operative workmen who would not use the protection offered them. The first pair have remained well since their recovery. From this it will be seen that with control the incidence of industrial lead poisoning can be reduced to practically nothing. The purpose of this communication is to show how this aim can be achieved.

The essence of this control lies in regular and frequent checking of the workers. This is done by examining all employees once each month except in the case of those who are directly exposed to litharge dust or incandescent lead fumes. These workers are checked every two weeks. The investigation consists of inquiry into the general health, the bowel action and the mental alertness of the employee. The examination is directed especially to the appearance of the blood. In addition the respirator is checked for fit and for mechanical efficiency.

Much stress is laid upon the appearance of the blood. In the laboratory the film is checked to determine the number of "lead cells" present. It is really a reticulocyte count and therefore any departure from normal is not actually an exclusive index of plumbism. But under the circumstances "the lead count" is a satisfactory name and a

useful guide. The haemoglobin is also routinely estimated.

The "lead cells" are reported in thousands fractions of thousands and are the numbers found in each million of red cells. The lowest significant figure is 1,000 and this, together with a high haemoglobin percentage, is quite satisfactory. Counts below 5,000 cause no concern, for many workers are well and efficient with counts as low as 4,000 or even a little higher. Beyond 5,000, however, the matter causes increasing concern as counts should the figure rise to 10,000 the worker's condition is diagnosed as "lead intoxication." Curiously enough some workers stoutly maintain that they feel perfectly well even with counts as high as 25,000, but all of these show a corresponding fall in haemoglobin and a decrease in efficiency in their work. All the blood examinations are made in the laboratory of the Department of Health where the technique and nomenclature used is that employed throughout Canada and the United States.

Some observations on "lead poisoning" may be made here. The term "lead poisoning" is erroneous. Its use which, however, is likely to persist, is objected to because it calls to mind the picture of a dramatic and dangerous seizure associated with writhing and pain. Such a picture does not occur in industrial poisoning. The usual appearance is of pallor and depression in a person who suffers from lethargy and acute, obstinate constipation. In such cases the "lead count" may be below 10,000, in which case the diagnosis is "lead absorption." When the figure is above 10,000 the diagnosis is "lead intoxication."

Lead colic tends especially to occur in new employees and may appear with counts well below the critical 5,000. Usually pain and consti-

oculization are present and, mentally, there is more or less severe depression. This colic can be very quickly relieved by giving a 10% solution of calcium chloride intravenously. In persons with high counts colic rarely occurs.

The rate of lead absorption varies greatly in different individuals under the same working conditions. It is accelerated by upper respiratory infections, not because such infections lower resistance, but because the respirator aggravates the difficulty in breathing which accompanies rhinitis. The worker, therefore, prefers to breathe more easily, although more dangerously, and discards his respirator for longer or shorter, frequent or infrequent, intervals.

Reliance upon the "lead line" on the gums may be ill placed. Many workers have the lead line with normal counts and scrupulous mouth toilet and dental care may prevent the appearance of the line. The physician who is thinking of the possibility of lead colic in the differential diagnosis of abdominal pain can thus get no sure guidance even when a line upon the gums is present.

The motto of industrial medicine is that prevention is better than cure. Therefore in the matter of lead the same applies. Here are the methods of treatment now used in lead cases:

A. Prophylaxis

1. Respirators. The worker's best friend is his respirator, but to serve well it must be worn regularly and must be kept in a state of perfect working order. There are three types of respirator in use. All are of the same basic design. They are, of course, officially approved. The wearing parts such as head harness, facelets and filters, are replaced as soon as the need arises.

2. Plant Housekeeping. This is important. It consists of wetted swept floors, air-tight partitions

Barbiturate Prescriptions

Ottawa—Druggists may repeat a barbiturate prescription if the physician, dentist or veterinary surgeon marks on the prescription "repeat", the Minister of National Health and Welfare, the Hon. Brooke Claxton, has pointed out.

"Some misunderstanding seems to have arisen regarding the exact regulations covering these drugs," Mr. Claxton said. "The situation is that, on recommendation of the Dominion Council of Health, the regulations under the Food and Drugs Act were amended in October, 1941, to limit the sale of barbituric acid, its compounds and derivatives only on individual prescription by a qualified physician or dentist. In March, 1945, veterinary surgeons were added to those who might issue pre-

and air conditioning. The danger zones in any plant can be determined by analysis of the air for its lead content, a service which the Department of Health freely places at the disposal of all manufacturers and of all plant physicians.

3. Cleanliness of the employees' hands is important because the contaminated fingers may transfer appreciable quantities of lead to food or to cigarettes. Perhaps the danger from this source is not very great but it constitutes a danger and therefore should be eliminated. The real danger lies, of course, in the fine dust which is inhaled.

B. Active Treatment

This is essentially the treatment of anaemia.

1. Diet. No great stress is laid on diet, not because the nature of the food is unimportant, but because the worker will not adhere to a "de-leading" diet.

2. Ferrous Gluconate. It is given in 10 grain doses three times daily. The tablets are supplied.

3. Calcium Gluconate. It is given in 10 grain doses, also three times daily and is sometimes added to the iron. The action of calcium is to remove lead from the blood and deposit it in the skeleton. Its use tends to prevent colic.

If in spite of prophylaxis and active treatment the worker still suffers from absorption of lead he is moved to another job until he has recovered. Then he is tried again and, unless he is careless, can keep his "lead count" at a safe figure. If he cannot he is advised to seek less hazardous work.

This little survey of our technique and results of a year's control shows how much can be done by supervised control, not only to avoid the expense of hospitalization but to add to the efficiency and comfort of the workers themselves.

scriptions for barbiturates. This step was necessitated by the requirements for these drugs in veterinary practice, particularly in small animal surgery."

The number of times which the prescription may be repeated should be clearly set forth on it, Mr. Claxton added. If the prescription states "repeat as needed", the onus is then on the person who issued the prescription—not on the pharmacist who fills it. The only situation under which an unmarked prescription may be repeated is for the pharmacist to verify with the issuer as to whether or not a refill may be made.—Division of Information Services, Department of National Health and Welfare, Jackson Building, Ottawa. IS-12.

A Case of Bilateral Abductor Paralysis Treated by the Brien King Operation

Richard O. Burrell, M.D., L.M.C.C., Ch.M., F.R.C.S. (Edin.), F.R.C.S. (C.)

Three sets of muscles control the movements of the vocal cords (Fig. 5).

1. Tensors. These increase the tension of the cords on phonation.

(a) The cricothyroid muscles—supplied by the superior laryngeal nerve, by contracting, tilt the posterior eminence of the cricoid cartilage on a pivot joint and stretch the vocal cords. Paralysis of this nerve results in a husky voice and anesthesia of the larynx (Fig. 1).

(b) The thyro-arytenoid muscles run in the free edge of each cord from the tip of the arytenoid vocal process to the anterior angle of the thyroid cartilage. They are supplied by the recurrent laryngeal nerves and therefore are rarely paralysed alone, but commonly suffer from fatigue in singers, etc., and in such cases show the typical laryngoscopic appearance of pure intrinsic tensor paralysis (Fig. 2).

2. Adductors. These adduct the cords on phonation and both are supplied by the recurrent nerves.

(a) The inter-arytenoid muscles have a bilateral nerve supply so that it is impossible to have a unilateral paralysis. They run from one arytenoid cartilage to the other and draw these cartilages together.

(b) Lateral crico-arytenoid muscles extend from the muscular process of the arytenoid, laterally and anteriorly and inferiorly to the side of the cricoid cartilage and contraction leads to adduction of the vocal process. Bilateral adductor paralysis is often functional and gives a whisper voice. Unilateral paralysis is usually due to a central lesion or to some incomplete lesion anywhere along the course of the recurrent laryngeal nerve. The voice in such a case is weak, but in ordinary conversation is difficult to detect as abnormal (Fig. 3).

3. Abductors. These abduct the cords during inspiration and are supplied by the recurrent nerves.

While there are on each side two tensors and two adductors there is only one abductor—the posterior crico-arytenoid muscle. It is by far the most powerful intrinsic muscle and runs from the muscular process of the arytenoid medially and inferiorly to the posterior surface of the cricoid cartilage. Unilateral paralysis can only be detected on examination and causes no great disability. Bilateral paralysis leaves the patient with a good voice. The inspiratory stridor on the slightest exertion, chronic anoxia, fear of suffocation, the

dyspnoea and supra clavicular indrawing are almost diagnostic of this lesion (Fig. 4).

According to Semon's rule, complete lesions of the recurrent nerves go through three stages of paralysis, first of the abductors, followed by that of the tensors and later by adductor paralysis; contrary to this, the usual post-thyroidectomy syndrome is one of the first, complete paralysis (Fig. 6), then abductor paralysis. The lack of expiratory difficulty in bilateral abductor paralysis is due to the trap door arrangement of the vocal cords so that expiration then tends to blow the cords apart, whereas inspiration sucks them closer together (Fig. 4).

The usual treatment for bilateral abductor paralysis is emergency or elective permanent tracheotomy. Rarely some patients, by being exceptionally careful in avoiding exertion, colds or laryngitis, are able to evade the operation, but the constant fear of suffocation causes great anxiety.

Nerve suture has been unsuccessful, mainly because four to six weeks of paralysis results in intrinsic muscle fibrosis and crico-arytenoid ankylosis. Complete division of both nerves to produce the cadaveric position, has also been unsuccessful, possibly for the same reason. Excision of one or both cords, or of an arytenoid cartilage, is followed by the formation of a diaphragm of scar tissue with still greater disability.

The Brien King operation results in a good airway and the resulting voice, while a little husky, is satisfactory.

This patient, a woman age 43, presents the usual picture of bilateral abductor paralysis which follows injury to the recurrent nerves during thyroidectomy. The operation on her thyroid, performed elsewhere, was done in January, 1944. For three months she had aphonia or whisper voice, then gradually as her voice improved she developed increasing inspiratory stridor indicating that complete paralysis was being followed by abductor paralysis. The literature indicates that the stridor is usually at its height in two years time. This patient was first seen eighteen months post-operatively when her stridor was marked. She had a constant loud inspiratory stridor at night while asleep and was very nervous and anxious. The slightest effort such as counting or touching the toes twice produced a loud stridor and great anxiety. She was very dyspnoeic and had difficulty in sustained conversation, although her voice was good. Even on quiet respiration there was

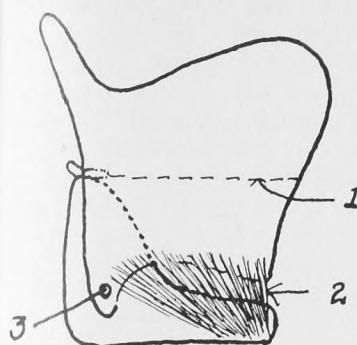


Figure 1

1. Vocal cord stretched by
2. Crico-thyroid muscle (a tensor) supplied by superior laryngeal nerve
3. Pivot joint
4. Thyro-arytenoid muscle (a tensor)
5. Vocal process of arytenoid cartilage

Superior laryngeal nerve paralysis shows the typical wrinkled edge of the cord on attempted phonation due to the fact that the thyro-arytenoid muscle stiffens the edge of an unstretched cord

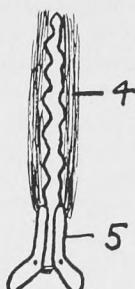


Figure 2

Diagrammatic representation of the intrinsic muscles supplied by the recurrent laryngeal nerves.

1. Thyo-arytenoid (a tensor)
2. Inter-arytenoid (adductor)
3. Lateral crico-arytenoid (adductor)
4. Posterior crico-arytenoid (abductor)
5. Vocal process of arytenoid cartilage
6. Muscular process

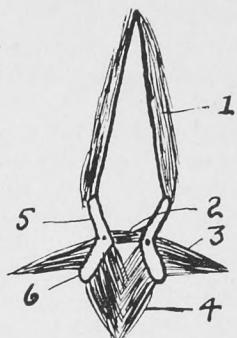


Figure 4

Attempted phonation in pure intrinsic tensor paralysis due to fatigue of thyro-arytenoid — seen in professional singers— The cords are blown apart.

Figure 5

1. Paralysed post-crico-arytenoids are unable to abduct the cords. A good voice, but has inspiratory difficulty. Described as abductor or posticus paralysis.
2. Trap door effect of bilateral abductor paralysis.

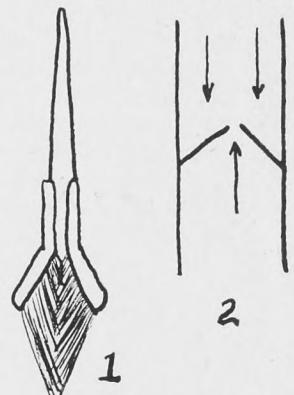


Figure 6

Complete intrinsic paralysis. Classical double glottic chink appearance.

1. Abductor paralysis
2. Tensor paralysis
3. Inter-arytenoid paralysis

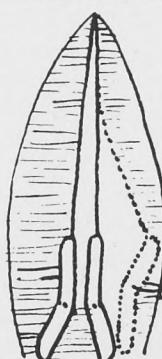


Figure 7

Effect of modified Brien King operation. The disarticulated arytenoid cartilage is pulled laterally by a suture through its vocal process.

supraclavicular indrawing and slightly audible stridor.

Laryngoscopic examination showed the typically opposed immobile cords of bilateral abductor paralysis (Fig. 4). This was confirmed by Dr. K. C. Johnston. The patient was put on calcium and vitamin D and although the blood calcium and phosphorous were normal she was given slight relief by this therapy for three months when it lost its beneficial effect. This temporary partial relief of symptoms has been noted before in other cases and is difficult to explain. The patient was advised to have the Brien King operation. She was anxious that it be done immediately, but she was continued on calcium and sedation while the technique of the operation was practiced on cadavers. Twelve of these operations were done in the post mortem room. I was assisted in many of these instances, and in this particular case, by Dr. K. C. Johnston.

This patient was then subjected to a Brien King operation. The anaesthetic was difficult, particularly the intubation, which was done before the patient was put to sleep. It was very desirable that the rigidly opposed cords be intubated without damage in order to prevent post-operative oedema and it was thought unwise to put the patient to sleep first for fear of complete respiratory obstruction.

The technique consisted of exposing the posterior margin of the left thyroid cartilage. The inferior constrictor was separated from its attachment to this edge. Then keeping well anteriorly and carefully retracting the laryngeal ventricle, which had a great tendency to bulge into the operative field, the upper border of the cricoid cartilage was located. This was followed to the crico-ary-

tenoid joint and after dividing the lateral crico-arytenoid muscle, the ankylosed joint was completely disarticulated with a fine scalpel. Then, holding the muscular process with a fixation forceps, the vocal process was cleaned on its lateral surface only and transfixated by a silk suture in a fine fully-curved, very small, cutting needle. If the medial surface of the vocal process is disturbed, it may be inadvertently freed from the vocal cord or the cavity of the larynx may be entered. The silk suture was brought through the thyroid cartilage and tied with slight tension while the anaesthetist inspected the effect through the direct laryngoscope. The result of the operation is the abduction of the whole arytenoid cartilage and particularly its vocal process with the attached vocal cord. This enlarges the airway at the posterior commissure. There was considerable post-operative glottic oedema and a tracheotomy set was kept in the room at all times for the first few days, but was not used (Fig. 7).

The result of this operation has been very gratifying. The patient is pleased. She can run up two flights of stairs without developing stridor. She has no stridor while asleep. She can easily touch her toes ten times without difficulty. She can count to 24 without drawing a breath and has no stridor during the subsequent inspiration. Her voice is slightly husky, but of good volume and tone.

The accompanying drawings explain the text and as can be seen are highly diagrammatic.

I wish to thank Dr. Johnston for his invaluable assistance and Dr. M. R. Bennett for her skill and judgment in the administration of the anaesthetic and in the pre- and post-operative care.



Stabilizing the Knee Joint through Thigh Muscle Development

Fourth Paper of a Series by Henry Funk, B.A., M.D., Ch.M.

Demonstrator in Orthopaedics, University of Manitoba. Orthopaedic Consultant in Ninette and St. Boniface Sanatoria

Inasmuch as the first line of defence of a joint is its muscles, and the second line its ligaments, it immediately becomes apparent that the integrity of a joint is dependent primarily on the muscles which act upon it, with the ligaments coming into play mainly when the muscles are inactive.

This premise conveys numerous implications and it is quite evident that if the muscles acting on the knee joint become weakened as a result of injury, disuse or disease, the stability of the joint will be impaired. If, for example, the lower limb is encased in a plaster cast to immobilize a fracture, and the thigh muscles are not used actively, then weakness ensues. Removal of the cast after a period of weeks or months, will demonstrate marked impairment of function of the knee joint. This is partially due to the prolonged immobilization, but chiefly to the thigh muscle weakness. Even non-inclusion of the knee joint does not completely guard against such weakness, although impairment of function will be less if the cast has been a walking cast permitting some active use of the muscles.

But a reverse mechanism may be productive of muscle weakness. The knee joint may sustain injury through direct violence resulting in a sprain, dislocation or fracture, or the cartilages may be injured, leading to pain on movement of the joint. Similarly a degenerative process, such as osteo-arthritis, may result in painful movements. The patient consciously or unconsciously favours that joint and muscle weakness ensues. This then provides a perfect "set-up" for a vicious circle: the joint being painful, active use becomes restricted, muscle weakness develops and with muscle weakness, stability of the joint is still further impaired, the pain becomes more intense and so on.

Bandaging such a joint routinely, or using a brace, is a pernicious practice as the patient becomes too dependent on such devices and this favours muscle wasting or impedes the recovery of wasted muscles. With removal of the bandage or brace instability of the joint is greater than before.

Consideration of the action of the knee joint and of the muscles acting on it will serve to clarify the purpose of keeping these muscles active and strong. The knee joint, although being considered a hinge-type joint, and functioning as such, through most of its range of flexion and extension, has yet another action. This is a more complex movement and enters at the point of

full extension. Examination of a femur reveals that the lateral condyle lies almost directly under the lateral edge of the shaft of the femur, whereas the medial condyle projects considerably medially to the medial side of the shaft and, in the erect position, the shaft of the femur inclines medially from above downward. The lateral condyle then serves as a pivot on which the femur rotates somewhat internally, the medial condyle meanwhile sliding slightly backward on the tibia. In this manner the joint is firmly "screwed home" and the cruciate and collateral ligaments being taut in this position provide firm fixation.

The muscles of the thigh acting as agonist and antagonist during the motion of flexion and extension of the knee joint combine in the final stages of extension to complete the manoeuvre. These muscles may be divided into two groups: Extensors and flexors of the knee joint. In the extensor group we have the quadriceps femoria, i.e., rectus femoris, vastus medialis, vastus intermedius and vastus lateralis. The flexor group comprised of the hamstrings, i.e., semi-membranosus, semi-tendinosus and biceps femoris, the sartorius, gracilis and adductor longus coming into play once flexion has been initiated by the gastrocnemii and popliteus.

However, there are at least two other muscles which also act upon the knee joint, namely, the tensor fascia femoris and the gluteus maximus. Both of these are inserted into the fascia lata, which in turn is attached to the tibia and fibula and is a vital structure in maintaining stability of the joint. So then, there are a large number of muscles acting upon the knee joint and to obtain adequate function of that joint the strength and, incidentally, active control, of these muscles, must be maintained.

Pre- and Post-operative Application

Elective surgery, as the term implies, permits of optimum preparation of the patient before proceeding with such surgery. Such preparation does not merely entail correcting nutritional or blood deficiencies, elimination of localized or general infection, etc. For example, if a knee joint is to be explored, there are very few contraindications to improving or developing the strength and function of the thigh muscles pre-operatively.

Such a precautionary measure may not only prevent serious post-operative sequelae but also shorten the convalescent period materially. Most

individuals never practise the voluntary control of their individual muscles and it is truly surprising to see the sluggish response shown in an attempt at application of such a measure. This applies particularly to elderly people, because it is equally amazing how well 'teen-aged children respond. It is understandable that if an individual is unable to master voluntary active control of his muscles while the muscles are in a relatively normal physiological state, that the response will be still poorer if a surgical insult be imposed. In fact a state of apparent paralysis may follow surgery, and this may continue for an indefinite period, or even become permanent. And if the term "mental alienation" is applicable anywhere I feel that it is here, since, although only the muscle attachment has been injured by virtue of an incision, yet, voluntary control may be completely lost. But an individual who has mastered voluntary active control, and has developed those muscles pre-operatively, is not likely to suffer complete loss of control post-operatively.

Post-operatively or following an acute or chronic illness and preparatory to getting the patient out of bed, redevelopment of the thigh muscles greatly speeds his progress to normal walking. And what better way is there of utilizing the patient's time in bed than to activate and develop his muscles in preparation for the time when he will be leaving that bed.

Method of Application

Getting the patient to voluntarily contract his quadriceps group may be a very difficult and time-consuming procedure, especially where these muscles are too weak to maintain extension of the knee joint with the limb elevated. It then becomes necessary to teach the patient how to contract his muscles to the limit of their capacity. When the knee is extended and the muscles relaxed, the patella is loose and can be shifted from side to side. When the quadriceps contracts, the patella is held firmly against the femur and passive movement is resisted. Thus with contraction and relaxation of the quadriceps the patella is held alternately firmly or loosely. Some patients do not understand this simple exercise and one then has to make them feel the actual stretching and relaxation of the muscles. It is useful to assist the patient to extend his knee by raising the heel slightly and then have him co-operate in this movement. At first only a flicker of contraction in the quadriceps may be detected but with perseverance the patient soon learns to do this without assistance. Usually the patient experiences no trouble contracting the quadriceps of the unaffected limb and it may be useful to have him try to contract both quadriceps simultaneously and get him started that way.

Having learned how to contract his muscles, a period of five minutes out of each waking hour is spent in this fashion. Then, when the quadriceps is strong enough to maintain extension of the knee while the leg is being raised, elevation exercises are practised as a substitute. The quadriceps being attached to the tibial tuberosity through the patellar tendon, has to do a considerable amount of work when one considers that most of the weight of the leg and foot below the tuberosity is being supported at this one point. When the muscles have become strong enough to permit doing this exercise continuously for five minutes, additional work is imposed on them by tying a five-pound weight around the ankle and lifting this with the knee extended. At first it may be possible to perform this only a few times but gradually strength increases until a continuous session of five minutes can be performed. This particular exercise is commonly termed "Quadriceps Drill."

Unfortunately development or "overdevelopment" of the quadriceps is not the whole solution to stabilizing the knee joint. If the whole lower limb is encased in a plaster cast, it may be found that while the patient is quite able to do elevation exercises without effort, yet when the cast is removed the quadriceps may still be so weak that such exercises are either impossible or can be performed only with great difficulty.

The explanation for this lies in the fact that the cast extending well up on the thigh raises the leg from this point by virtue of hip flexion and the quadriceps comes into play very little if at all. To overcome or prevent such weakness occurring the patient must revert to the elementary stages, namely, simple contraction of the quadriceps.

Obviously when the limb is encased in a plaster cast, flexion and extension of the knee joint cannot be performed, and, if for this reason or because the patient's condition precludes other exercises being performed, one has to be content with quadriceps exercises alone.

To develop the flexor group of muscles, contraction against resistance must likewise be practised. Figure 1 illustrates a simple device for exercising both the extensors and flexors and any basement provides ample room for such an apparatus. To exercise the extensors a cord is attached to the heel by an anklet as in A and with each extension of the knee the weight W is raised. The size of the weight varies according to the patient's ability to lift it and is increased as the muscles become stronger, to exert maximum effort. For the flexor group the pull is reversed as in B and with each flexion of the knee joint

the weight W is again raised. However, it must be pointed out that the two groups of muscles have to be exercised separately and both weights cannot be attached simultaneously, else they counterbalance one another and the muscles are required to do no amount of work.

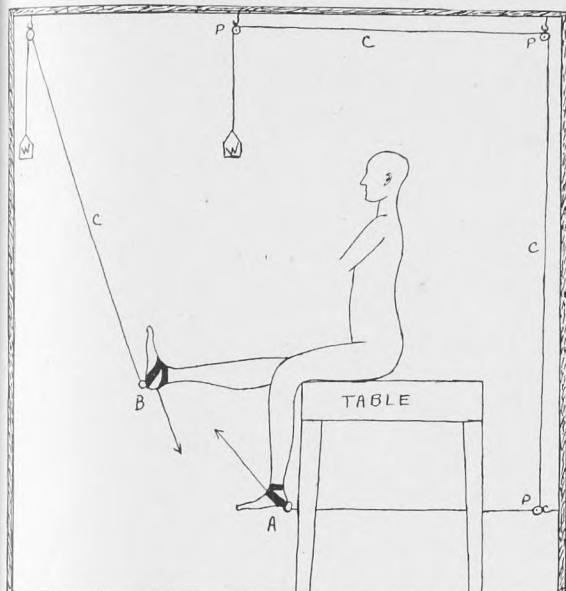


Figure 1

A—Extensor exercise attachment.
B—Flexor exercise attachment.
P—Pulley, C—Cord, W—Weight.

Such exercises will develop the thigh muscles more than average walking and can be performed in many instances when weight bearing must be deferred.

Activating and redeveloping the strength of the thigh muscles is of wide application. The contra-indications apply wherever rest of these muscles is imperative, e.g., the earlier stages of union of a fracture of the femur, repair of these muscles, fractures about the knee joint where active contraction will disturb the alignment, inflammatory processes, etc. In addition to pre- and post-operative indications, osteo-arthritis knee joints are greatly stabilized and often rendered painless by redeveloping or overdeveloping thigh muscle strength and the necessity for wearing a brace or operative measures may be obviated. Similarly, injured cruciate and collateral ligaments need not be the source of much disability if the muscle strength is well developed. When fracture union has progressed to the point where muscle contraction will not disturb the position of the fragments, quadriceps exercises are indicated. Even in injuries below the knee, as in the foot, which prevent partial or complete weight-bearing, the patient can by exercises prevent muscle weakness, and the circulation of the limb can also be kept in a much better state.

Having maintained the muscle strength throughout the period of convalescence the patient never knows how much benefit he has derived from these exercises and the attending doctor will be gratified by the rapidity with which such an individual becomes restored to usefulness.

Development of the muscles acting on the hip joint have been purposely omitted, since these muscles do not act directly on the knee joint. But they also can readily be exercised by applying a similar principle as in Figure 1. Where a prosthesis is to be fitted all groups of muscles should be developed preparatory to the fitting.



Re: Shortage of Maternity Beds

Dear Doctor:

The following is a letter received by the Council of the Winnipeg Medical Society, which we consider of sufficient importance and urgency to have a copy sent to each practicing physician in Greater Winnipeg:

"At a meeting of the conjoint Gynecological and Obstetrical Staffs of the various hospitals in Winnipeg we brought in the following recommendations in regard to the shortage of maternity beds in the hospitals at the moment:

1. That the stay in hospital postpartum be limited when possible to eight days.

2. That all available private wards be converted into semi-private accommodation, possibly leaving one or two wards for exceedingly ill patients.

We feel that this will increase our maternity accommodation by about 15 to 20 per cent and will meet the temporary lack of accommodation for such people as exists at the present time."

We trust that you will endeavor to co-operate during the period of bed shortage.

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R. A. MacPherson, M.D.,

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Section of Anaesthesiology

P. C. Lund, M.D., Anaesthetist, Deer Lodge Hospital

Anesthesia for the Aging and Aged

Knight, R. T., and Baird, J. W.

Journal-Lancet 64: 183-185 (June), 1944

"The mental attitude of old people is, on the whole, peaceful and receptive . . . This peaceful and unconcerned approach helps the anesthetist to achieve a smooth and well controlled anesthesia. However, a tendency to mental confusion is common to a good many old people and adds to some of the physical difficulties of preparation for anesthesia and operation . . . When general anesthesia is to be employed, it should be induced before manipulation or position is attempted. It is especially important to use enough pillows under the head, neck, back and knees, or wherever indicated by the conformation of the body . . . The aged patient will require less premedication than the more robust individual. Morphine is sometimes tolerated rather poorly by the aged . . . Each patient must be considered individually, if sedation is to be handled correctly. Many patients in this age group are not senile and should be sedated as any other normal adult. Age is only one factor in senility. Other factors as weight, occupation, activity, muscle tone, hemoglobin, confinement, recent weight loss, and pain must be weighed before arriving at the correct pre-medication. Moreover, barbituric acid products should be used carefully in the aged. These products tend to depress the aged patient and to make his operative and post-operative course unsatisfactory . . . The anesthetic agent and method of administration to be used in the individual case must be chosen with care . . .

"Local and regional anesthesia . . . (are) perhaps the safest in the aging individual. Unfortunately, however, it cannot be used in every instance . . . Spinal anesthesia is usually tolerated very well by the aged . . . This statement, however, should be qualified to some extent. The aged do not tolerate sudden changes in physiological mechanisms. For this reason, one should strive to maintain normal conditions as nearly as possible. Sudden drops in blood pressure should be prevented. This fall in blood pressure may damage an already failing cardiac system. Sudden rise in blood pressure should also be combated. This is especially true in the hypertensive individual, for an increase of pressure in such a person may lead to a cerebral accident . . . In many operative procedures on the aged, cyclopropane is perhaps the agent of choice. This is true because the action of the gas is rapid and pleasant; a high concentration of oxygen may be maintained at all times, thus reducing the danger

of anoxia; patients usually awaken readily; the post-operative period of depression is short; nausea and vomiting are reduced. One of the main objections to cyclopropane is the cardiac irregularities one encounters, especially with the higher concentrations of the gas . . . Recently . . . a standardized product of curare (intocostrin) has been placed on the market. This product is being used extensively to obtain muscular relaxation. The patient is lightly anesthetized with cyclopropane and intocostrin is administered intravenously to produce muscular relaxation. This agent has proven highly satisfactory in the aged. By combining these two agents one reaches nearly an ideal condition. The superior qualities of cyclopropane retained, and combined with these are the excellent relaxing properties of curare . . .

"Ether, the old standby, in the field of anesthesia, is perhaps still the safest agent in the hands of the inexperienced. This may be only a false sense of security. While the progress of the patient may be satisfactory at the time of the operation, his post-operative course is usually more stormy than that following cyclopropane. Ether predisposes to more post-operative depression. Respiratory complications, nausea and vomiting with accompanying dehydration are more common following ether . . . Nitrous oxide and ethylene are to be condemned to some extent in surgery of the aged. The chief objection to the use of these gases is the danger of anoxia . . . Intravenous anesthesia . . . has been of great benefit to the aged. Sodium pentothal in 2½% concentration has proved to be the most valuable agent . . . Pentothal should be used carefully in the aged. The induction should be slow . . . Pentothal should not be used in major surgery. Its use should be confined to operations requiring little muscular relaxation and in those not over forty-five minutes to one hour in duration . . . Along with the administration of these anesthetic agents, one must consider the treatment of shock and other general care of these patients. Shock manifests itself early and in a more severe form in the aged. The judicious use of intravenous fluids, plasma, blood transfusions and oxygen and the various stimulants acting prophylactically, as well as therapeutically, will do much in preventing this complication. The prevention of or adequate treatment of this complication is frequently the keynote of success in the aged patient. Post-operatively the continued judicious use of intravenous fluids, plasma, blood transfusions and oxygen, combined with careful nursing and medical supervision, are factors which play an important role in the recovery of this group of patients."

Clinical Luncheon Reports

Children's Hospital

Psychoneurosis in a 14-Year-Old

No. 465208 L.O. Age 14 years, Male, admitted to W.C.H. February 26, 1946.

This boy presented himself at the Out Patient Department February 24, 1946, complaining that he felt "just awful," with constant worrying, frightening dreams, insomnia, and feeling down-hearted about things. He was at times aware of pounding heart, perspiration and shaky hands. He stated that he has always tended to cry easily when upset but for the past three months just has "not been able to cry." He could not "think straight" and had great difficulty in concentrating at school. He repeatedly referred to congested, irritating living conditions at home. Psychiatric consultation was obtained on the following day and a social history recorded at the Child Guidance Clinic. Following this he was admitted to hospital for treatment.

The history of a disturbed home life extends over several years and there were many quarrels when his parents were together. There is one younger brother. The father is trying to establish a business in another city. The mother and two boys live with the mother's parents and brother in a small home. The grandmother tends to be an economical tyrant; for example, does not allow the boys to flush the toilet after each use. The boy had enuresis up to age 9 years, and has, in the mother's opinion, always been "kind of nervous and fussy," wanting things to be "just so." The mother and father have both had indifferent health. It was apparent the mother had little knowledge of or interest in the boy's activities. Our patient, on the other hand, seemed unduly concerned and worried over his mother's party life and wondered about her carrying on with other men.

He is popular at school and was doing well in grade seven. He belonged to Air Cadets, Scouts and attended Sunday School. He used to go to Art School and liked drawing. He mixed fairly well in the usual sports. All these extra curricular activities have been decreased or stopped one after another during the past three months because he had lost both the energy and the interest for these things. His school work average at Christmas was somewhat lower than usual. Latterly he has spent a lot of time at home.

On admission he complained of occasional headache, bouts of palpitation, dry mouth, frequent sighing breaths, dyspnoea on exertion, a tendency to constipation, and an uncomfortable feeling in the pit of his stomach.

Physical examination showed slightly dilated pupils, flushed face, mottled moist cool palms, slight tremor of fingers, B.P. 150/90, pulse 80, hyperhydrosis; but no clinical evidence of thyroid disease. The examination was otherwise normal.

During the interview with the psychometrist, he broke down and cried copiously, feeling better after this. Despite this evidence of acute tension he scored an I.Q. of about 92 (Binet-Stanford). The I.Q. of 92 represents a low average but we feel certain this is not a true score, considering the emotional state at the time of the test.

As there was little hope of improving the home situation, admission to hospital appeared indicated. With relief of his anxiety reactions he would be in a better state to cope with the disturbing factors in his home. He remained in hospital for twelve days, during which time he received decreasing doses of phenobarbital and was encouraged to be quite active in the day time. The physical manifestations of general tension soon subsided. Sleep and appetite became quite adequate. Frequent interviews showed he had moderately good insight. He appeared to realize that the best solution to the home difficulties for him was to recapture former outside pleasures and spend less time at home. On the other hand some discouraging features regarding prognosis became apparent as he showed too much liking for the hospital and actually requested that hospitalization be continued for a few more days when discharge was broached. A certain amount of pressure and an undue amount of reassurance seemed necessary before he would accept discharge.

Since discharge on March 10, 1946, he has been examined on four occasions. Many of his symptoms have recurred and he is again showing increased tension, fatigue and inability to force himself back into former activities. There is now fairly definite evidence that his mother is leading a pretty irresponsible life. The question of placement for this patient has to be considered, although our chief concern is not so much the inadequate home situation as the unhealthy intrinsic features as are evidenced by undue dependency, immaturity, instability, with the past history of enuresis, timidity and a sensitive artistic make-up. On his last visit, April 8th, he was out on a part-time job and he seemed much better generally.

Psychiatric Summary

A 14-year-old boy, voluntarily requesting hospitalization for a fairly typical psychoneurosis, showing both acute anxiety and depressive features. Moderate predisposition related to long

standing insecure home background with parental discord and frequent moves. Precipitating factors appeared to be: adolescence, overcrowded unsettled grandparents' home, mother irresponsible, father in another city apparently unaware of wife's behaviour, patient's concern regarding future possibilities for re-union of parents and thus a more settled home for him.

Treatment

Superficial improvement and temporary relief of symptoms was easily accomplished by removal from home to a more protected environment with reassurance, moderate sedation and increased activity. Fundamental improvement, i.e., resolution of his neurosis, much more difficult as this may require not only placement away from present home situation (if he can take this), but sustained efforts by school, boys' clubs, Child Guidance Clinic, etc., to help him grow up, to the extent that he will have adequate resistance against such situations that now so disturb him.

At Ward Rounds, March 7, 1946, it was pointed out that a florid and fairly classical neurosis at 14 is not very common and this type of case is more apt to be considered as "no medical problem" than to be misdiagnosed.

St. Boniface Hospital

A Case of Heart Failure and Hyperthyroidism

Dr. L. R. Coke and Dr. A. C. Abbott

A single woman, fifty-two years of age, was admitted to St. Boniface Hospital on January 12th, 1946, with acute dyspnoea, cyanosis, and generalized anasarca. Her pulse was weak and irregular and the electrical record showed fibrillation at a rate of 200. There was an asymmetrical exophthalmos with marked protrusion of the right eye. The B.M.R. was 60. The thyroid was diffusely enlarged and her weight on admission was 243 pounds.

It was found on questioning that she had been taking "Thiouracil" for four months. She was kept on Thiouracil 0.1 gm. t.i.d. and was digitalized with digitaline (Nativelle). She was also given ammonium chloride and two injections of Salyrgan. She responded with a loss of weight of forty-five pounds in ten days. Lugol's solution, m. X. t.i.d., was given for another ten days and the B.M.R. was then normal. Thyroideectomy was performed on February 3rd, 1946, during which a ligature was inadvertently placed around the recurrent laryngeal nerve, but this was removed. Post-operatively, she developed aphonia and hallucinations and was difficult to manage for a few days. However, she gradually recovered and is now feeling well with a normal cardiac rhythm and no signs of heart failure. The voice has also

completely recovered. Digitaline and quinidine were not required after operation.

Digoxin or digitaline are not normally used in the treatment of hyperthyroidism and most patients with fibrillation do well without it but, in this case, heart failure was an outstanding feature and it was not known whether any further response could be obtained from Thiouracil. There is still some controversy as to whether or not thyroid disturbance is the primary cause of this type of heart disease but, in any case, even though the heart disease is merely aggravated by the thyroid disturbance, there is no doubt that the thyroid gland should be removed.

In discussion, Dr. Fahrni said that his military duties had not given him the opportunities that some others have had to study the effectiveness of Thiouracil. He asked if it was always advisable to use Thiouracil or if it might not be well to use Lugol's pre-operatively in some cases. Dr. Abbott in reply said that he still used Lugol's alone for some cases as Thiouracil is a toxic substance with 0.5 per cent mortality from agranulocytosis. The advantage of this drug, however, in complicated cases is that it affords a longer period in which to prepare the patient for operation. The B.M.R. usually drops about one point per day. In the case under discussion, the more rapid fall of the B.M.R. was believed to be due to the correction of the heart failure which was contributing to the elevation.

Winnipeg General Hospital

A Case of Pernicious Anaemia Treated with Synthetic Folic Acid

Dr. J. M. Kilgour

Synthetic Folic acid is a product developed by the chemists of the Lederle laboratories, which is alleged to be similar in its action to the Folic acid which has been found to be present in brewers' yeast and liver. It was given its first clinical trial at Vanderbilt, where it was found to be effective in the treatment of macrocytic anaemia associated with non-tropical sprue. More recently there have been numerous reports of its efficacy in the treatment of pernicious anaemia. As yet this product has not been released for general use and the supply for experimental purposes is limited.

The patient is a 64-year-old male, a farmer who was in good health until 1943. At that time he had an acute gastro-intestinal upset with nausea, vomiting and diarrhoea; later came marked weakness and dizziness, and finally a psychotic episode with recovery only after some time in a mental hospital. Since that time the only symptoms until less than six months ago were numbness and tingling of the extremities.

When first seen on April 30th, he was found to be weak and pale with a trace of atrophy of the lateral aspects of the tongue; liver was just palpable and spleen was enlarged. There were no neurological abnormalities other than brisk tendon jerks, and absent vibration sensation below the crest of the ilium. Gastric analysis revealed total achlorhydria with histamine. There was a trace of albumin in the urine.

Blood (May 1st): R.B.C.'s, 1,500,000. Haemoglobin, 37%. Mean corpuscular diameter, 7.8 micra. Slight leukopenia, and differential showed shift to the right. Reticulocytes, 0.6%. Mean corpuscular volume, 132 (upper limit of normal, 90). Mean corpuscular haemoglobin, 35 (normal, 26 to 32). Mean corpuscular haemoglobin concentration, normal.

Bone Marrow: Hyperplasia of the myeloid and erythroid elements with 10% megaloblasts (normal less than 1%).

From May 3rd to May 10th synthetic Folic acid was given orally, 100 mgms. daily. There was a marked reticulocyte response — 4% on the fourth day to a peak of 39% on the sixth. By the tenth day 9% of red cells were reticulocytes. At this time a large dose of 30 U.S.P. liver extract was administered intramuscularly, and as no further reticulocyte rise occurred it was felt that the crisis produced with Folic acid was analogous to that usually following liver injection. By May 15th red blood cells were 2,500,000; mean corpuscular volume and leucocyte count were returning to normal.

The results in this case suggest that a maximal haematological response can be expected from synthetic Folic acid. It is probable that a dosage of 30 to 50 mgms. daily would be adequate. Nothing is yet known regarding the effect of this drug on neurological symptoms of pernicious anaemia. Particular advantages appear to be: (1) the drug is given orally and (2) it is effective in those cases which show sensitivity to liver.

X-Rays in Ruptured Duodenal Ulcer A Five-Year Survey

Dr. M. Kiernan

A review of the records of the Winnipeg General Hospital for the years 1941 to 1945, inclusive, disclosed that 82 cases of ruptured duodenal ulcer had been treated in the hospital during that time. Of these, 68 were acute and 14 chronic.

Age incidence: 20 - 30	7
30 - 40	16
40 - 50	23
50 - 60	24
60 - 70	10
Over 70	2

Incidence as to sex: 78 male, 4 female.

Mortality, 8. Four post-operative (two chronic and two anterior perforations). Four had not been operated on. One of these refused operation and the other three were misdiagnosed as coronary occlusion.

Of these 82 cases 38 had X-rays, and of these 12 showed no free air in the peritoneal cavity. In 26 an X-ray diagnosis of "ruptured viscus" was made, 24 because of the presence of free air in the peritoneal cavity and two because of barium spillage. Therefore, confirmation of clinical diagnosis was made by X-ray in 66.6%, which is approximately what has been reported from other centres. The special positions used are, (1) erect and (2) horizontal on the left side, which facilitates escape of air through the perforation.

Free air is not apparent in every case for a number of reasons: (1) There may be early walling off. (2) There may be little air in the stomach and duodenum. (3) The perforation may be immediately plugged with solid food particles. (4) The spasm of the duodenal wall may cause a functional closure.

W.G.

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Something Old

The French Evil

It was true I had been ill; but I think I had caught the malady from that pretty young servant girl whom I had in my house at the time I was robbed. The French evil was latent in me for four whole months; then all at once it covered my body. It did not show itself in the usual form, for I was covered with red boils of the size of farthings. The doctors were never willing to call it by the name of the French evil; and yet I told them why I thought it was so. I continued to treat myself in their fashion, and got no better. Then at last I made up my mind to take lignum vitae, against the wishes of the first doctors in Rome. I took it with the greatest system and abstinence you can imagine, and in a few days I felt very much better, so that at the end of fifty days I was cured, and as sound as a fish in the sea. Then as a restorative after my great exhaustion, as soon as winter came on, I amused myself with shooting. This forced me through the wind and the water, and to stand about in the marshes, so that in a few days I was a hundred times worse than before. Once

more I put myself into the hands of the doctors, and they went on treating me; but I grew worse. When the fever attacked me again, I made up my mind to take the guaiac. The doctors would not hear of it, and they told me that did I have recourse to it while I still had fever, I should be dead in a week. However, I made up my mind to disobey them, and I kept to the same system as before. When I had drunk the guaiac water for four days, the fever left me quite, and I began to feel wonderfully restored. While I was treating myself thus, I was all the time getting on with the models; and during this period of abstinence I made the finest things and the rarest designs I ever did in my life. At the end of fifty days I was altogether cured, and with the utmost care set myself to fortify my health. After this long fast I was cleansed from my malady as if I had been born again. But though I took pleasure in the restoration of my health, I did not work the less, now at the Pope's chalice and now at the Mint; each of these tasks had their due share of my energies.—Benvenuto Cellini, "Memoirs."

Something New

The Prevention of Mammary Carcinoma

Is it possible that cancerous mothers unwittingly contaminate their unaffected children and so perpetuate the disease? In the January number of the New York State Journal of Medicine is an article by Ludwik Gross, who is Chief of the Research Unit, Veterans Administration Hospital, New York. The article is entitled "The Possibility of Exterminating Mammary Carcinoma in Mice by a Simple Preventive Measure." It would appear that mammary carcinoma in the female mouse is in several ways similar to that in the human female. If the findings reported by Gross can be applied to the human there seems much reason to believe that the incidence of breast cancer can be reduced greatly. Here is Gross' summary:

"Recent experiments leave no doubt that mammary carcinoma of mice, a disease very similar to, if not identical with, breast cancer in women, is communicable from one generation to another through the milk of nursing mothers. Animals transmitting the disease appear to be in perfect health at the time they nurse their offspring, and do not display any symptoms of tumors until they reach the 'tumor age.' The agent transmitted in milk and responsible for the development of tumors has the characteristics of a virus: it is filterable, and can be destroyed by heat. The development of mammary carcinoma can be

entirely avoided in susceptible mice by preventing the newly born animals from nursing their potentially cancerous mothers, and transferring the offspring for the purpose of nursing to females whose milk is free from the cancer agent.

A working hypothesis is advanced suggesting that human tumors may be similar to those of mice, and that breast cancer of women may perhaps be communicated from one generation to another through the milk of nursing mothers. The nursing women may be in perfect health at the time they transmit the disease; and yet they may carry the tumor agent, and be therefore responsible for the development of breast cancers in their daughters later in life. It is therefore suggested that women of families with any malignant tumors in their ancestry refrain entirely from nursing their children. Since no more than a few hours of breast feeding may suffice to transmit the tumor agent, breast feeding should be abandoned in such families from birth, and artificial feeding substituted. Feeding of pasteurized human milk should also be considered; a brief boiling of human milk, such as is routinely done in certain milk banks, would serve the same purpose.

This simple preventive measure may save many human lives. The results will not become evident, however, until the next generation reaches the 'tumor age'."



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Book Reviews

Clinical Electrocardiography

The electrocardiograph has become such an essential instrument on diagnosis that most doctors find almost daily need for its use. It would seem desirable, then, that they should become as familiar with cardiographic interpretation as they are with radiographic interpretation.

The electrocardiogram is merely one form of evidence. It is never to be regarded as telling the whole story. Accurate interpretation, therefore, depends very largely upon an understanding of the clinical condition of the patient and no one can know more about that than the doctor in attendance. That being so the attendant should furnish himself with a knowledge of the essentials of cardiographic interpretation and such a knowledge one can gather from a study of this book.

It consists of 260 pages divided into short sections and well illustrated with cardiograms and diagrams. There is discussion of the theory and methods of electrocardiography. The normal contours are described as well as the factors which produce normal variations. The mechanism, measurement and significance of axis deviation, the effect upon the tracing of endocrine and other disorders are all considered satisfactorily. Adequate space is given to the recognition of patterns produced by coronary thrombosis, pericarditis, pulmonary embolism, etc. Disturbances of rate and rhythm are considered from the standpoint of the mechanism involved. All are illustrated and much clinical detail is added in explanation of the tracings presented. The introduction of clinical and therapeutic data is of distinct advantage to the clinician. Pitfalls in interpretation are pointed out and in other ways the book is adapted to those who are unfamiliar with the subject.

The pages are double column and the type not large so that the actual amount of reading matter exceeds that in some larger works.

Because many of the figures include several tracings the actual number of cardiograms presented is almost 350.

There is a very complete index. The authors are well known as teachers and investigators, the senior author having been an associate of Wenkebach. The work is, therefore, highly authoritative. It has been translated into three languages and enjoys a wide popularity in Latin America. This new edition should likewise be popular and it

can be recommended to all those who use electrocardiograms and wish to have a better understanding of what they mean.

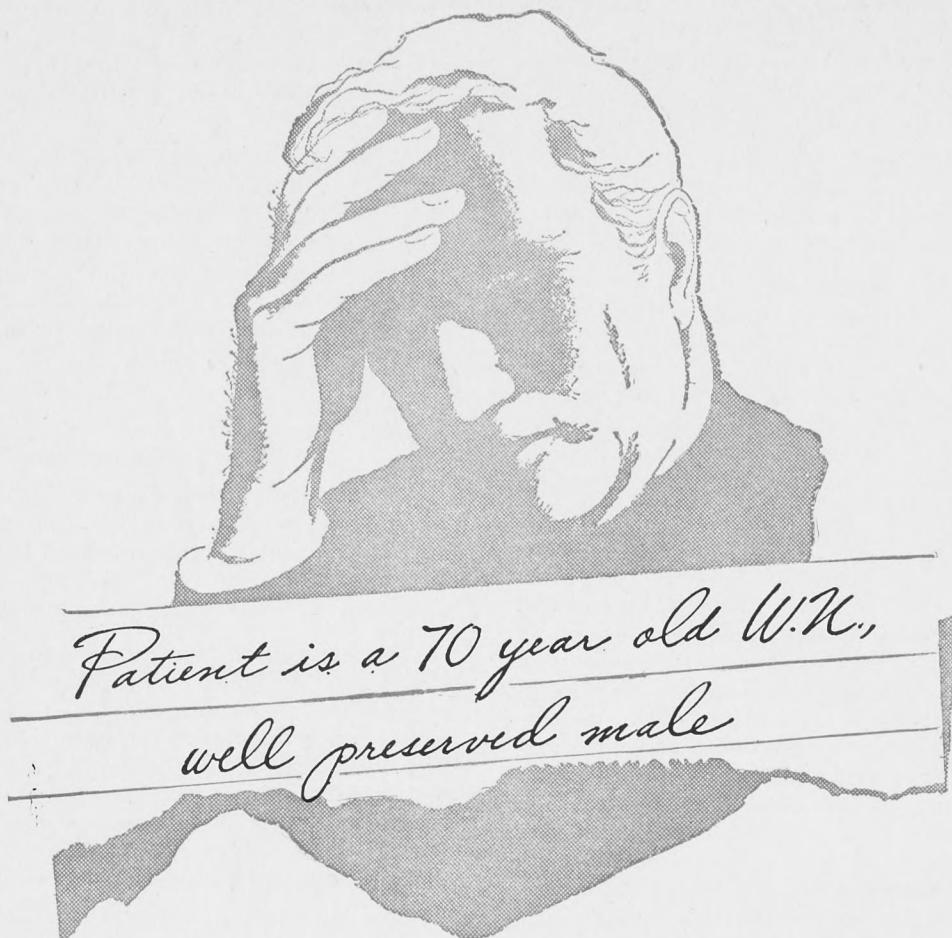
Clinical Electrocardiography. By David Scherf, M.D., F.A.C.P., Associate Professor of Medicine, New York Medical College, Flaver and Fifth Avenue Hospitals; and Linn J. Boyd, M.D., F.A.C.P., Professor of Medicine, New York College of Medicine, Flaver and Fifth Avenue Hospitals. Second edition, 267 pages, 243 illustrations. Montreal: J. B. Lippincott Company. \$10.00.

A Book For Every Office

The Secretary's Desk Book. A modern guide to correct English with approved forms for business, official and social correspondence, including the Winston Dictionary, 1945. The John C. Winston Company, 60 Front Street West, Toronto. \$4.50.

The Secretary's Desk Book is so completely useful in every office that it should be found in every office. It contains over 1,200 pages, 930 of which are a dictionary of over 100,000 words. The remaining 327 pages are divided into three sections. The first of these devoted to words, their arrangement and uses. It answers a host of everyday questions such as: Should capitals be used? Is this sentence grammatical? Is the punctuation correct? Is this word or idiom being used properly? Is the spelling correct? And so on for many like questions. The second section deals with office practice and includes filing, the preparation and correction of manuscripts, the preparation of bibliographies and other information of value to doctors' secretaries. The third section is concerned with business writing and includes a chapter on parliamentary procedure and the conduct of meetings. To these three sections there is a 13-page double-columned index which gives you an idea of how much these sections cover—everything from the placing of a comma to framing a resolution.

This does not by any means touch all the matter dealt with but is enough to show the scope and usefulness of the book. Our advice is that you purchase one for your secretary—the chances are you will use it almost as much yourself. The price is barely that of a good dictionary and you not only get a very good dictionary but much more besides.



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Basic Formula SQUIBB

1. Spies, Tom D.; Cogswell, Robert C., and Vilter, Carl: J.A.M.A. (Nov. 18) 1944. Spies, Tom D.: Med. Clin. N. Am. 27:273, 1943.
2. Spies, Tom D.: J.A.M.A. 122:911 (July 31) 1943. 3. Jolliffe, Norman, and Smith, James J.: Med. Clin. N. Am. 27:567 (March) 1943.

For literature write

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Editorial

J. C. Hossack, M.D., C.M. (Man.), Editor

"Palmam Qui Meruit Ferat"

The election of Dr. Fred McGuinness to the highest honour within the gift of Canadian Medicine was welcome news to his Manitoba colleagues. For many years and in many capacities Dr. McGuinness has given generously of his time in our service. He has taken a leading part in our professional activities and his leadership has been sought, welcomed and appreciated. He, consequently, not only deserves this new honour but is exceptionally well qualified to do it justice. Therefore, we extend to him our congratulations on being awarded the palm he so deserves to bear; and, that our good wishes may be more substantial, we are all prepared to help him, in any way he deems fit, to make his year of office an outstanding one.

Council Should Report Activities

We have on several occasions urged that there should be at least one meeting each year at which the Councillors and Members of the College of Physicians and Surgeons come together to discuss their affairs. The Council of the College is the only elected group which gives no direct report to its electors and it is difficult to find any good reason why this should be so. This year a new Council will be elected and it would seem highly desirable that those who are about to give up office should give a report of their activities during the past four years. It should be a simple matter to arrange such a meeting during the Convention of the Association.

Letters to The Editor

The Editor,
The Manitoba Medical Review,
Winnipeg, Man.

Sir:

On page 317 of your May number there is reproduced a report of the Admissions Committee presented to the College of Physicians and Surgeons with reference to admissions to the Medical Faculty of the University of Manitoba. On page 318 there is set forth the resolution adopting this report.

The report expressed one attitude—not unanimously held—to the question of Canadian citizenship.

It states "we have not progressed so far . . . that our Jewish citizens are . . . looked upon simply as Canadians. We still mark them off as a semi-separate group."

During the war another attitude found expression. Jewish air crew were not marked off as a semi-separate group. Jewish infantrymen and gunners were not marked off as a semi-separate group, nor were Jewish doctors in the services marked off as a semi-separate group. Casualty lists, too, were characterized by the same impartiality.

There is thus expressed two contrasting attitudes toward Canadian citizenship. The one so aptly worded by Kipling as "the lesser breeds within the law"; the other calling for personal sacrifice from every citizen because all were "looked upon simply as Canadians."

As members of a learned profession taking pride in our moral concepts, which of these two attitudes is to be ours?

That there is a grave problem in selecting students for the Medical College is obvious, but to attempt to solve this problem on the basis of assumed differences in quality of citizenship or on the basis of "semi-separate groups" is not in the best interests of this country.

I remain, sir,

Yours truly,

Alan Klass.

♦
Winnipeg, Manitoba,
June 17, 1946.

Dr. J. C. Hossack,
Editor, Manitoba Medical Review,
Winnipeg, Manitoba.

Dear Dr. Hossack:

While in a friend's office I inadvertently came upon a copy of The Manitoba Medical Review for May, 1946. On page 317 I found a report presented by Dr. T. Digby Wheeler in the name of Dr. H. Bruce Chown, dealing with the question of admission to the Medical School. I take the privilege to write you in this matter. I do so as an alumnus of the University of Manitoba (M.A. '29, Ph.D. '43), and also because I feel I have certain special knowledge which may contribute towards a fuller discussion of the issues involved.

Dr. Chown's report deals largely with the question of the admission of Jewish students to the Medical School. Here is what he says: "The students were therefore selected on the basis of the one criterion of marks. On this basis approximately 30% of the students selected were Jewish . . . Last year, in the Legislature, the cry was raised, that the non-Jewish Medical community, as

represented by the Committee of Selection, was unfair to the Jewish community. This year in the Faculty the cry has been raised that the Jewish community is being unfair to the non-Jews." The background of this issue merits careful consideration.

The question of admission to the Medical School is not at all recent. In the late twenties it was increasingly brought to my attention that discrimination was being practiced against Jewish students seeking admission to the Medical School of the University of Manitoba. On making close inquiry this is the situation as it presented itself to me. Yearly, a number of students of the Jewish faith otherwise fully qualified to enter in upon medical studies on the basis of scholarship and moral character were being refused admission. At the same time students of other denominations, whose scholastic standing was in no wise higher, were accepted without question. In effect, a quota system of admission seemed to be in effect. This questionable situation continued for approximately 15 years. It naturally engendered a considerable amount of ill-will. Eventually, Mr. M. A. Gray, M.L.A., acting entirely on his own initiative, brought the matter to the attention of the local House. A series of public hearings followed. At that time a Committee consisting of Mr. S. Hart Green, K.C., Mr. Samuel Freedman, K.C., and the undersigned were invited to appear before the Board of Governors. We presented a brief which we subsequently argued. Briefly, the substance of our presentation and of our argument was this: We live in a democratic community. A democracy by definition implies that each citizen enjoys the attendant communal rights and responsibilities as a matter of right and not of sufferance. Consequently, life in a democracy demands equality of opportunity. This in turn implies that any standard other than those of a purely objective character can not be applied for the determination of fitness to enter into any given profession. To argue otherwise is to deny the fundamental basis on which a democracy rests. Hence, we concluded in our presentation to the Board of Governors, we hold a racial quota basis, wrong in principle. The only criteria which we can admit are those which are objective in character. We also argued that this is the only fair means that any professional group can in good conscience adopt in order to get the best students and therefore the best future practitioners, to enter into a given profession.

I am still of the opinion that this is the only criterion which this or any other Medical School can apply in the selection of future Medical practitioners. I can not under any circumstances admit that one's racial origin or religious affiliation has anything to do with his fitness as Medical

practitioner. My limited knowledge of biology seems to tell me that professional skills are not the exclusive possession of any racial group.

Dr. Chown suggests, "I would suggest that those with some authority in the Jewish Community take this matter in consideration and attempt some selection themselves." If this suggestion were followed it would only strengthen the artificial dividing lines which already separate the various groups within the community.

The experience of the war years has shown that to win a war demanded the co-operation of all groups on the Canadian scene. It must also teach us that to win the battle of the peaceful development of our Canada, the same principle must be applied.

I remain,

Sincerely yours,

Solomon Frank

(Rabbi Solomon Frank)

Obituary

Dr. A. W. Moody

Dr. A. W. Moody, veteran physician of Winnipeg and chief medical officer for the Manitoba Division of the Canadian Pacific Railway from 1914 to 1940, died on June 20 at his residence.

Born in Yorkshire, England, 78 years ago, he came to Canada at an early age. He was educated at the Collegiate Institute, Hamilton, Ont.; taught school at Oak Lake, Man.; then entered Manitoba Medical College. Graduating in 1895, he became house surgeon at St. Boniface Hospital, and next year went to the Winnipeg General Hospital as Medical Superintendent. He continued in that capacity for four years, then engaged in private practice. For many years he was an active member of the honorary attending staff of the General Hospital, and assistant and then associate professor of clinical medicine in the Faculty of Medicine of Manitoba University. He was a member of the University Council and of the Board of United College. In 1928 he was elected a Fellow of the Royal Society of Arts of London, England. For two years he was President of the Conservative Club of Winnipeg.

He is survived by his widow, Elizabeth Holland Moody, who at the time of their marriage was superintendent of nurses, Winnipeg General Hospital, and has continued to take an active interest in nursing affairs; his son, Herbert H. G., a prominent architect; and two daughters, one the wife of Lester B. Pearson, Canadian Ambassador at Washington; the other Mrs. Grace Young, widow of Capt. Norman Young, headmaster of Ravenscourt School for Boys, who was killed at Dieppe, August, 1942.

Manitoba Medical Service

Manitoba Medical Service

When Manitoba Medical Service was instituted, the Chairman of the Board stated that there would be no interference with the practice of medicine as carried on previously. Some of you may say that this has not been fulfilled; that formerly you were a law unto yourselves, and that now you are restricted by rules and regulations which never existed in the past. We are a free people, but have you ever noticed the policemen or the various regulatory signs on the streets and highways; you are aware that there are magistrates and judges to deal with infractions of those rules and regulations; yet you will still insist that you are free. To the same extent you are free to practise as you have done in the past, but you must appreciate that if there were no regulations there would be chaos.

With this introduction, I ask if medicine is being practised as it has been in the past, and from my experience in the centre of things I am inclined to say no. Take the case of the patient who has been given free choice of doctor and all the necessary aids to restoration of health; here is a situation very different from the time when he had to consider his pocket book and also the importance to him of medical diagnosis and treatment. Probably every one of us has some physical handicap which does not cause sufficient inconvenience mentally or physically to induce us to seek advice which may or may not make us physically perfect. Offer to everyone the privilege of seeking skilled advice and what is going to be the answer? If there were no health service and those people knew that it would cost \$50.00 to \$100.00 to get a very complete examination, many of them would decide that they knew of better methods of spending their money. Give those same people in return for a small sum monthly all the advantages of modern medicine, and the doctor will soon find that his hand is being forced, and he is told that his patient has read all about the latest methods and is going to have them. Should the doctor demur he is also told that perhaps another practitioner will be more complacent. As a matter of fact that threat is not as serious as it sounds, for in order to make a change we insist that the reasons must be submitted in writing; if trivial or if our records show that advice has already been given by two or more experts, the request is refused.

Another brake on extravagant demands in the past was that before being committed to much work and expense, the doctor had to be reasonably sure that he would be remunerated for it; this of course did not and does not now apply

to emergencies. Influenced by the demands of patients, he gives much more service to many of those in the lower middle class than he would have done in the past, and because many others are doing the same there is not nearly enough in the pot to meet all demands in full, and I doubt if there ever will be even when a government health service comes into operation. The service has been welcomed with joy by that group which includes the neurotics, neurasthenics, and hypochondriacs; formerly they had to be contented with widely advertised nostrums; now they endeavour to consult as many physicians as possible, before we catch up with them and try to put a stop to it.

I had in past years a very good example of some of the points I have been presenting. A distinguished professor in a large eastern city spent his holidays in his camp in the west; before returning he called on me regularly for a health exam for which I charged him \$5.00. On one occasion he asked me if I wondered why he came to me, seeing that he had frequent contacts with important physicians in his daily work; and went on to tell me that he could get a very thorough examination at a minimum cost of \$50.00, and doubted if anything would be found which I had overlooked. He is as far as I know still quite active.

You will see from all this that though we have tried to remove the financial obstacles between doctor and patient, we have merely succeeded in replacing them by others which are just as awkward. One thing seems desirable and that is that we should so build the structure that it will withstand the severe strain of a deflation which is bound to come when inflation has run its course. We have taught the public the value of such a service, as was forcibly impressed on me a short while ago, when a well-to-do citizen criticizing a contemplated move on the part of the profession, decided that he would make a deal with a commercial organization; there are plenty of those waiting for the possible breaking up of the "doctor's scheme."

There is a problem which can neither be solved by algebra nor mathematics; (a) there is a great shortage of teaching material in the public wards; (b) I have yet to meet a doctor who has as a private patient one who formerly attended the out-patient departments or entered a public ward. Many when enrolled could not give the name of a family doctor. What has become of them?

This month Mr. Richardson has left me to tell you a tale of woe. I have looked over the records

of other plans all of which are solvent, as we are not. Associated Medical Services in Toronto has a reserve of over \$400,000.00. Of course it operates on a much lower fee scale than we do, has many regulations and restrictions that we do not have and instead of enrolling groups, hand-picks individuals and families. Hollinger Mines' service is running on an even keel, it also has a lower fee basis. The British Columbia plan, about which much less is known, has a reserve of \$11,708.20. In April we had 30,820 members. 4,647 claims amounting to \$44,560.00 were submitted and were approved at \$42,406.00. In addition 250 claims amounting to \$3,708.00 were rejected. The net result is that the average income per member is \$1.06, and the average cost per

member is \$1.38. For some months the picture had been improving gradually the cost per member coming down to \$1.08; for some reason probably to be found above this is the worst month we have ever had. Amounts allotted to doctors average \$141.00, each member of a clinic being paid individually; the high and low were \$495.00 and \$2.00. In some months the high has amounted to \$1,000.00 or over. The D.V.A. scale when it comes into effect will be much higher than the present one, but that will not increase the revenue therefore the percentage paid on bills will probably be lower.

E. S. Moorhead, M.B.,
Medical Director

How to Become an Artist

How to Become an Artist

This is what you do: 1, from a dealer in art supplies purchase some oil colours, brushes and prepared canvas; 2, find a spot simple and scenic; 3, paint. So, according to Harvey Agnew, should the doctor break into art. He advises, farther, that you should coax a "kindly" professional artist to accompany you on some of your jaunts so as to explain the basic principles. Dr. Agnew no doubt uses "kindly" advisedly. One can easily imagine how the unkindly variety would react to the blunderings of an amateur. He would most likely break the easel over your shoulders, push the canvas over your ears and smear the colours over your face. The kindly professional, who is probably a friend with visions of you some day poking about in his belly, will do his teeth-gnashing safely out of sight.

Authorities agree that your first attempt is likely to be somewhat less than a masterpiece but do not let that discourage you. Perhaps your first pair of tonsils didn't come out as nicely as planned. If your painting, when it is finished, bears little resemblance to the object or scene it is meant to represent, turn it sideways or up side down. The result may be quite intriguing. It will probably look less than ever like its original but it may acquire a strange out-of-this-or-any-other-worldness that will make it hauntingly unique. Your spouse, unless she is an ultra-impressionistic esthete will probably want to put it in the fire but by no means let her do this. If it looks crazy enough label it "Inner Thoughts of Dracula" or "Oedipus making a Complex," put it in an expensive frame, hang it in the place of honour, and, dollars to doughnuts, someone who thinks he knows all about modern art will fall into raptures and identify it as a juvenile Dali or a pre-natal Picasso.

Jesting aside there can be no question of the value of art as a hobby. It can be indulged in without regard to season or weather; it can be practiced indoors or out; it affords a pleasure which one can enjoy alone or share with others. It trains the eye and gives scope to the imagination. No hobby is more delightful nor is there any in which the satisfying, the beautiful and the useful are so combined.

It is common to hear people say "I wish I could draw" as if such an accomplishment were possible only to a gifted few. But we are assured by those who know that anyone who can write can draw. That may discourage some who are conscious of their calligraphic shortcomings but even they are included. However, wishing won't take the place of trying and it is in order to encourage doctors to try that Meade Johnson & Co. have issued "Parergon Supplement." This little book has been written for the benefit of those who can appreciate, but are not skilled in the limner's art. It contains short articles by the officers of the American Physicians Art Association. There are lists of text-books especially useful to the beginner. There is information about the forthcoming exhibition and about the prizes then to be given. There are already over 5,000 physicians in the Association, and I am sure that this little book will encourage many others to join. A year or two ago Mead Johnson & Co. published a large and beautifully illustrated volume called "Parergon." It contained reproductions of work done by doctors in the field of art. Those whose artistic longings were stirred by these illustrations will, after reading the "Supplement," be eager to find means of satisfying them. The book is free.

Parergon Supplement, Mead Johnson & Co.
Evansville, Ind., U.S.A.

Personal Notes and Social News

Dr. and Mrs. W. G. Newman of Winnipeg are happy to announce the birth of a daughter (Cynthia Anne) on June 5th, 1946, at the Winnipeg General Hospital.

♦

Dr. J. Stewart McKenty recently returned to Winnipeg from Boston, Mass., where he completed a post-graduate course in ophthalmology at Harvard Medical School.

♦

Dr. William G. Lyall, after forty-eight years service with the Canadian National Railways, was honored by the officers and staff on the occasion of his retirement.

♦

Dr. and Mrs. J. Brace Baker of Brandon, Man., take pleasure in announcing the birth of a daughter (Carol Margaret) on June 15th, 1946, at the Winnipeg General Hospital.

♦

Dr. Walter Alexander has resumed practice after taking the annual post-graduate course in ophthalmology at Harvard Medical School. Dr. E. H. Alexander, who did locum tenens during the period, has returned to his home in Vancouver.

♦

Dr. Leonora Hawirko has left Winnipeg for San Francisco, where she will take a post-graduate course at the University of California Medical School.

♦

Dr. and Mrs. August Blondal's son, Harold, is engaged to marry Patricia Ann, daughter of Mr. and Mrs. Nat. Jenkins. The wedding to take place quietly on July 4th, 1946.

♦

Dr. Emmet Dwyer was elected president of the Alumni Association at a re-organization meeting recently held in the Broadway University buildings.

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Department of Health and Public Welfare

Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1946		1945		TOTALS	
	Apr. 21 to May 18	Mar. 24 to Apr. 20	Apr. 22 to May 19	Mar. 25 to Apr. 21	Jan. 1 to May 18, '46	Jan. 1 to May 19, '45
Anterior Poliomyelitis			3	2	1	8
Chickenpox	68	65	209	166	515	1060
Diphtheria	7	19	12	24	77	141
Diphtheria Carriers			1	2	6	22
Dysentery—Amoebic					1	
Dysentery—Bacillary				1	1	2
Erysipelas	3	8	1	8	38	27
Encephalitis			1			2
Influenza	3	16	19	20	136	116
Measles	155	65	84	41	297	272
Measles—German		8	6	3	11	17
Meningococcal Meningitis	1	1	1	1	8	9
Mumps	283	349	160	188	1271	817
Ophthalmia Neonatorum						
Pneumonia—Lobar	4	11	16	14	64	69
Puerperal Fever			1		1	1
Scarlet Fever	23	52	46	49	259	355
Septic Sore Throat	1	2	2	2	19	10
Smallpox						
Tetanus						
Trachoma						
Tuberculosis	45	117	67	46	308	224
Typhoid Fever		2		5	6	26
Typhoid Paratyphoid						2
Typhoid Carriers		1		1	1	2
Undulant Fever	1	1	3		7	7
Whooping Cough	20	34	20	41	126	193
Gonorrhoea	208	178	114	133	963	652
Syphilis	47	57	30	56	273	238
Diarrhoea and Enteritis, under 1 yr.	2	17		1	53	1

DEATHS FROM COMMUNICABLE DISEASES

For the Month of April, 1946

DISEASES	*732,000 Manitoba	*3,825,000 Ontario	*906,000 Saskatchewan	*2,972,000 Minnesota	*641,000 North Dakota
(White Cases Only)					
*Approximate population.					
Anterior Poliomyelitis	—	1	—	1	1
Anthrax		1			
Chickenpox	68	1,057	107		33
Diarrhoea and Enteritis, Under one year	2				
Diphtheria	7	28	1	39	7
Diphtheria Carriers		3	—	8	—
Dysentery—Amoebic		3	—	—	
Dysentery—Bacillary					
Encephalitis—Epidemic			1		
Erysipelas	3	5	3		
Influenza	3	24	1		5
Jaundice—Infectious		3	1		3
Measles	155	4,485	148	214	31
Measles—German		127	6		
Meningococcal Meningitis	1	8	1	9	
Mumps	283	1,572	209		
Malaria			2		
Pneumonia	4		1		13
Scarlet Fever	25	257	13	207	36
Septic Sore Throat	1	2			1
Smallpox					
Trachoma					
Tuberculosis	45	265	56	34	2
Tularemia				1	
Typhoid Fever		3	3	1	5
Typhoid Fever Carriers					
Typhoid Paratyphoid			1		
Undulant Fever	1	7		15	2
Whooping Cough	21	232		50	1
Gonorrhoea	208	572		23	
Syphilis	47	381		9	

Anterior Poliomyelitis in Manitoba, so far this year, shows only one case reported. Of course we are just approaching the season when it is most apt to be prevalent. The Southern States report some increase this year. Be on guard.

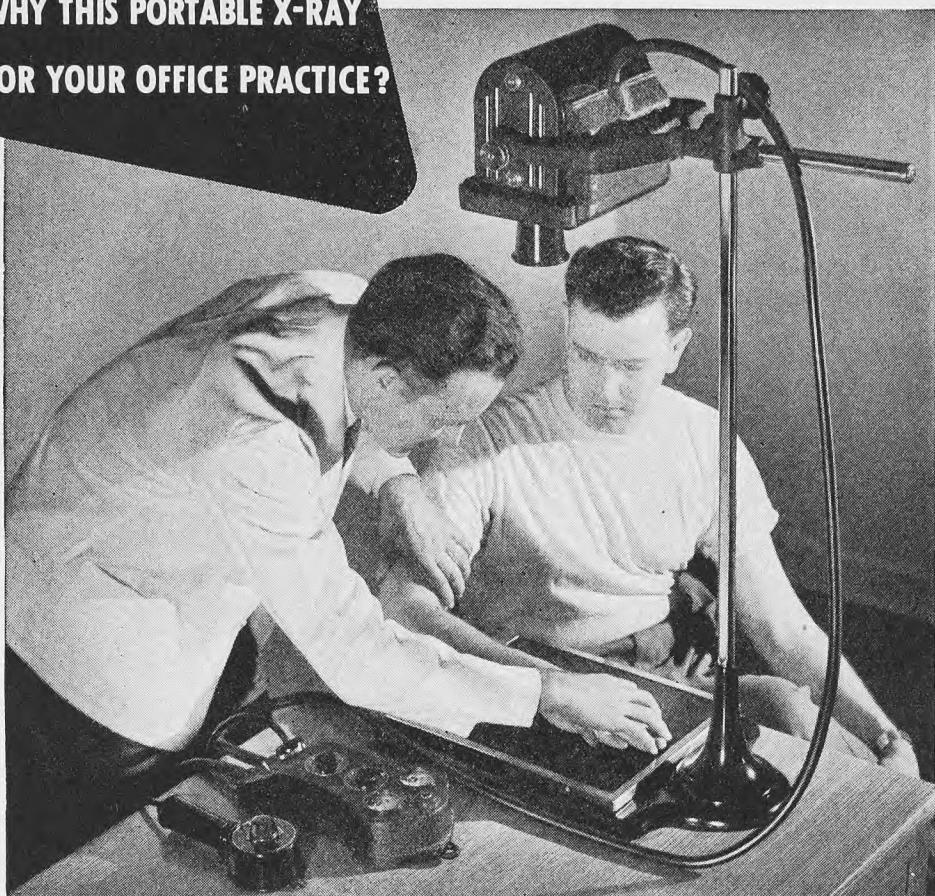
Mumps are showing a higher incidence this year and **Measles** may follow as they are quite common in Ontario.

Smallpox in Seattle and Washington State seems to be well controlled.

Venereal Diseases are still showing a definite increase over last year.

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Name	Address	Telephone
Adamson, Dr. Gilbert L., Winnipeg Clinic, Winnipeg	97 284	
Adamson, Dr. J. D., Winnipeg General Hospital	87 681	
Alexander, Dr. Walter, 214 Medical Arts Bldg., Wpg.	95 300	
Allen, Dr. C. S., 216 Panama Court, Winnipeg	41 185	
Anderson, Dr. Julius, 185 Maryland St., Winnipeg	404 065	
Austman, Dr. K. J., 704 McArthur Bldg., Winnipeg	95 826	
Avren, Dr. S. S., 416 McKenzie St., Winnipeg	59 422	
Baldry, Dr. Geo. S., 616 Medical Arts Bldg., Wpg.	94 980	
Barrie, Dr. J. G., 11 Rosewarne Ave., St. Vital	204 643	
Beamish, Dr. R. E., 216 Medical Arts Bldg., Winnipeg	94 354	
Bellan, Dr. S., 400 Aberdeen Ave., Winnipeg	54 679	
Bell, Dr. P. G., Deer Lodge Hospital, Winnipeg	62 821	
Bennett, Dr. Wm. J., 12 Newhaven Apts., Winnipeg	33 772	
Benoit, Dr. C. F., 114 Claremont Ave., Norwood	202 470	
Berger, Dr. M., 428 Anderson Ave., Winnipeg	58 345	
Berbrayer, Dr. Peter, 205 Boyd Bldg., Winnipeg	94 112	
Berger, Dr. M., 428 Anderson Ave., Winnipeg		
Black, Dr. Geo. M., 325 Washington Ave., Winnipeg	503 054	
Bleeks, Dr. Cherry K., 105 Medical Arts, Bldg., Wpg.	93 273	
Bottomley, Dr. H. W., Winnipeg Clinic, Winnipeg	97 284	
Boyd, Dr. Wm. J., 1012 Ingwersoll St., Winnipeg	24 427	
Brotman, Dr. E. H., 1137 Portage Ave., Winnipeg	36 500	
Brown, Dr. M. M., 508 Medical Arts Bldg., Winnipeg	93 889	
Bruce, Dr. J. D., 20 Buckingham Apts., Winnipeg	96 780	
Burch, Dr. J. E., Winnipeg Clinic, Winnipeg	97 284	
Brusler, Dr. D. M., 58 Noble Ave., Winnipeg		
Cadham, Dr. R. G., City Hall, Winnipeg	849 122	
Carleton, Dr. M., 603 Boyd Bldg., Winnipeg	94 763	
Chestnut, Dr. H. W., 25 Knappen Ave., Winnipeg		
Clark, Dr. C. W., 216 Medical Arts Bldg., Winnipeg	94 354	
Cohen, Dr. Harvey, 153 Cathedral Ave., Winnipeg	56 007	
Cohen, Dr. R., 600 Boyd Bldg., Winnipeg	93 275	
Coke, Dr. L. R., 238 Spence St., Winnipeg		
Collins, Dr. D. R., Internes' Quarters, Winnipeg	87 681	
Cooper, Dr. Ross H., 212 Medical Arts Bldg., Winnipeg	93 103	
Corrigan, Dr. C. E., 307 Waterloo St., Winnipeg	401 271	
Cram, Dr. J. B., 409 Power Bldg., Winnipeg	95 165	
Croll, Dr. L. D., 661 Broadway, Winnipeg	72 133	
Daniel, Dr. E., Winnipeg General Hosp., Winnipeg	87 681	
Davidson, Dr. Kenneth, 6 Medical Arts Bldg., Wpg.	95 683	
Davidson, Dr. A. M., 6 Medical Arts Bldg., Winnipeg	95 683	
Decter, Dr. P. H., 283 Magnus Ave., Winnipeg	59 183	
Dennis, Dr. F. T., Deer Lodge Hospital, Winnipeg	64 861	
Doupe, Dr. J., 592 Strabrooke Ave., Winnipeg	46 501	
Downey, Dr. J. L., 333 Bartlett Ave., Winnipeg	46 751	
Easton, Dr. S., 216-7 Curry Bldg., Winnipeg	26 477	
Edwards, Dr. K. N., 139 Girton Boulevard, Tuxedo, Man.		
Elliott, Dr. M. R., 141 Ferndale Ave., Norwood		
Elvin, Dr. Norman L., 314 Medical Arts Bldg., Wpg.	95 317	
Eshoo, Dr. H., Misericordia Hospital, Winnipeg	37 035	
Evoy, Dr. G. H., 264 Edmonton St., Winnipeg	94 335	
Fahrm, Dr. Gordon S., 105 Medical Arts Bldg., Wpg.	93 273	
Fairfield, Dr. G. C., Portage la Prairie, Man.		
Feldsted, Dr. E. T., 602 Medical Arts Bldg., Winnipeg	93 996	
Flett, Dr. R. O., 203 Medical Arts Bldg., Winnipeg	92 934	
Franks, Dr. Fred, 492 Mountain Ave., Winnipeg		
Fryer, Dr. A. I., 5 Gloucester Apts., Winnipeg	30 576	
Furman, Dr. M. J., 463 Ash St., Winnipeg	403 505	
Galloway, Dr. G. D., 74 St. Mary's Rd., Norwood		
Gordon, Dr. Athol R., 505 Medical Arts Bldg., Wpg.	96 232	
Govan, Dr. W. R., Abbott Clinic, 409 Power Bldg., Winnipeg	95 165	
Green, Dr. P. T., 201 Hampton St., St. James, Man.	61 622	
Guest, Dr. W. C., 151 Yale Ave., Winnipeg		
Gyde, Dr. M. C., St. Pierre, Man.		
Hall, Dr. C. W., 1328 Pembina Highway, Fort Garry, Man.	49 498	

Hamilton, Dr. Glen F., 408 Medical Arts Bldg., Wpg.	93 846
Hart, Dr. W. J., 185 Kelvin St., Winnipeg	
Hastings, Dr. D. J., 634 Somerset Bldg., Winnipeg	98 727
Hayter, Dr. F. W., Deer Lodge Hospital, Winnipeg	64 861
Helgason, Dr. R. E., Glenboro, Man.	
Henneberg, Dr. C. C., 302 Medical Arts Bldg., Wpg.	92 710
Hillsman, Dr. J. A., 308 Medical Arts Bldg., Winnipeg	97 329
Hitesman, Dr. R. J., 512 Medical Arts Bldg., Wpg.	94 808
Holland, Dr. T. E., 203 Medical Arts Bldg., Winnipeg	96 948
Homik, Dr. A. M., 612 Cathedral Ave., Winnipeg	
Houston, Dr. A. B., 937 Warsaw Ave., Winnipeg	45 925
Hudson, Dr. J. E., Hamiota, Man.	
Hunter, Dr. H. B. M., Deer Lodge Hospital, Winnipeg	64 861
Israels, Dr. S., 701 Boyd Bldg., Winnipeg	97 223
Jacks, Dr. Q. D., 410 Medical Arts Bldg., Winnipeg	95 309
Jauvoish, Dr. S., 206 Boyd Bldg., Winnipeg	93 240
Jones, Dr. E. A., Ste. 5, 117 Bryce St., Winnipeg	43 283
Kasian, Dr. P., St. Joseph's Hospital, Winnipeg	57 211
Kierman, Dr. M. K., Winnipeg Gen. Hosp., Winnipeg	87 681
Kilgour, Dr. J. M., Winnipeg Clinic, Winnipeg	97 284
Kippen, Dr. D. L., 188 Home St., Winnipeg	35 987
Klass, Dr. A. A., 132 Matheson Ave., Winnipeg	55 022
Kobrinsky, Dr. M. T., 968 Strathcona St., Winnipeg	71 498
Kobrinsky, Dr. Sam, 602 Medical Arts Bldg., Wpg.	95 875
Kobrinsky, Dr. Sydney, 505 Boyd Bldg., Winnipeg	93 912
Lansdown, Dr. L. P., Pine Falls, Man.	
Lazareck, Dr. T. L., 616 Aberdeen Ave., Winnipeg	53 674
Leach, Dr. W. B., 150 Alloway Ave., Winnipeg	71 921
Lebbetter, Dr. T. A., Winnipeg Clinic, Winnipeg	97 284
Leishman, Dr. J. D., 400 Power Bldg., Winnipeg	96 234
Lerner, Dr. A. I., 211 McIntyre Bldg., Winnipeg	96 961
Loadman, Dr. B. E., Ste. 14A Pullmer Apts., Wpg.	43 601
Lotimer, Dr. L. E., Winnipeg Clinic, Winnipeg	97 284
Lund, Dr. P. C., Deer Lodge Hospital, Winnipeg	62 821
Lyons, Dr. R., 420 Niagara St., Winnipeg	404 009
MacDonald, Dr. Frank S., 616 Med. Arts Bldg., Wpg.	92 800
MacDonnell, Dr. J. A. K. (lady), Winnipeg Clinic	97 284
MacKinnon, Dr. W. B., 661 Broadway, Winnipeg	72 138
Maclean, Dr. Ian S., Winnipeg Clinic, Winnipeg	97 284
MacLeod, Dr. J. W., Winnipeg Clinic, Winnipeg	97 284
MacNeil, Dr. Robt. W., Children's Hospital, Winnipeg	37 271
MacNeil, Dr. Robt. W., Children's Hospital, Wpg.	57 031
Malkin, Dr. S., 701 Boyd Bldg., Winnipeg	97 223
Malone, Dr. M. C., St. Boniface Hosp., St. Boniface	201 121
Margolese, Dr. J., 414 Boyd Bldg., Winnipeg	24 541
Martin, Dr. J. H., St. Boniface Hospital, St. Boniface, Man.	201 121
Mathewson, Dr. F. A. L., 308 Med. Arts Bldg., Wpg.	94 942
McClulloch, Dr. A. W., Deer Lodge Hosp., Winnipeg	64 861
McFarlane, Dr. R. H., Internes' Quarters, General Hospital, Winnipeg	87 681
McFetridge, Dr. W. J. M., 104 Arlington St., Winnipeg	
McIntyre, Dr. Donald N. C., 303 Med. Arts Bldg., Wpg.	92 639
McKenty, Dr. J. Stewart, 514 Med. Arts Bldg., Wpg.	92 711
McKenty, Dr. Jack, 121 Girton Blvd., Tuxedo, Man.	61 777
McKenty, Dr. V. J., 205 Boyd Bldg., Winnipeg	94 112
McLandress, Dr. Murray, Apt. "D" Brentwood Lodge, Winnipeg	42 490
McNicol, Dr. H. L., Deer Lodge Hospital, Winnipeg	62 821
McPhail, Dr. D. M., St. Bon. Hosp., St. Boniface, Man.	201 121
McPhail, Dr. Ethel M., 90 Roslyn Road, Winnipeg	
McTavish, Dr. Geo. B., 206 Affleck Block, Winnipeg	98 620
Medovy, Dr. Harry, 401 Boyd Bldg., Winnipeg	93 849
Miller, Dr. I., St. Boniface Hosp., St. Boniface	201 121
Mitchell, Dr. J. R., Ste. 10 Fairhaven Apts., Winnipeg	72 187
Moffat, Dr. R. G., 340 Borebank St., Winnipeg	404 192
Moir, Dr. J. H., 41 Springside Ave., St. Vital, Man.	205 543
Moore, Dr. C. H., 116 Medical Arts Bldg., Winnipeg	97 706
Myers, Dr. R. F. M., 15 Clement Block, Brandon, Man.	
Natsuk, Dr. A. W., 75 Sherbrook St., Winnipeg	36 821
Neilson, Dr. Clive, 404 Medical Arts Bldg., Winnipeg	94 041
Orchard, Dr. S. A., St. Boniface Hosp., St. Boniface	201 121
Perrin, Dr. M. B., Winnipeg Clinic, Winnipeg	97 284
Pickard, Dr. E. W., 118 Lenore St., Winnipeg	

Pierce, Dr. M. M., 354 Stella Ave., Winnipeg	54 134	
Rabson, Dr. L. R., 452 Ash St., Winnipeg		
Rafuse, Dr. E. R., 320 Sherbrook St., Winnipeg		
Ramsay, Dr. F. G., 378 Borebank St., Winnipeg	402 669	
Revell, Dr. D. G., Winnipeg General Hospital, Wpg.	87 681	
Richardson, Dr. R. W., 105 Medical Arts Bldg., Wpg.	93 273	
Ridge, Dr. J. M., Clearwater Indian Hospital, The Pas, Man.		
Riley, Dr. H. W., Winnipeg Clinic, Winnipeg	97 284	
Rose, Dr. J. E., Winnipeg Gen. Hosp., Winnipeg	87 681	
Rosenfield, Dr. V. L., 405 Avenue Bldg., Winnipeg	97 141	
Rumball, Dr. A. C., Deer Lodge Hospital, Winnipeg	62 821	
Rusek, Dr. S. D., 399 Machray Ave., Winnipeg	58 474	
Rutherford, Dr. W. G., 695 Wolseley Ave., Winnipeg	33 569	
Ryan, Dr. George H., Winnipeg Clinic, Winnipeg	97 284	
Sandborn, Dr. B. S. E., Grace Hospital, Winnipeg	37 271	
Scarow, Dr. Hart G., Deer Lodge Hosp., Winnipeg	64 861	
Schoemperlen, Dr. C. B., 216 Medical Arts Bldg., Wpg.	94 354	
Shaver, Dr. W. A., 596 Spruce St., Winnipeg		
Smith, Dr. N. S. H., 275 Duffield St., St. James	63 224	
Smith, Dr. F. Hartley, 86 Tache Ave., Norwood, Man.	203 993	
Sommerville, Dr. A. N., 614 St. Mary's Rd., St. Vital	202 411	
Sommerville, Dr. A. N., 614 St. Mary's Rd., St. Vital		
Stephens, Dr. Gordon M., 635 Henderson Hy., Wpg.	503 965	
Stephenson, Dr. Earl, 409 Power Bldg., Winnipeg	95 165	
Stewart, Dr. D. B., 30 Ferndale Ave., Norwood, Man.	205 298	
Swartz, Dr. David, 303 Medical Arts Bldg., Winnipeg	92 639	
Swan, Dr. A. J., 303 Medical Arts Bldg., Winnipeg	97 005	
Swan, Dr. R. S., 215 Medical Arts Bldg., Winnipeg	94 354	
Tanner, Dr. A. R., 310 Medical Arts Bldg., Winnipeg	95 946	
Taylor, Dr. C. H., 606 Boyd Bldg., Winnipeg	98 937	
Taylor, Dr. J. R., 6B Chelsea Court, Winnipeg		
Tisdale, Dr. Paul K., Deer Lodge Hospital, Winnipeg	62 821	
Valsrub, Dr. Samuel, 310 Redwood Ave., Winnipeg		
Wakefield, Dr. G. E., Ste. 1, 270 Roslyn Rd., Winnipeg	44 889	
Walton, Dr. C. H. A., Winnipeg Clinic, Winnipeg	97 284	
Walton, Dr. Fred A., 3 Locarno Apts., Winnipeg	45 719	
Whelpley, Dr. E. H., 586 Ingersoll St., Winnipeg	39 061	
White, Dr. O. J., Winnipeg General Hosp., Winnipeg	87 681	
Whiteford, Dr. J. W., 520 Medical Arts Bldg., Wpg.	92 121	
Whitehead, Dr. Robt. G. D., 91 Maryland St., Wpg.		
Willows, Dr. R. L., St. Boniface Hosp., St. Boniface	201 211	
Wilt, Dr. J. C., Winnipeg Gen. Hosp., Winnipeg	87 871	
Winram, Dr. R. G., Ste. 51 Roslyn Apts., Winnipeg		
Brokovski, Dr. T. W.		Brandon, Ma
Brook, Dr. Joseph		Beausejour, Ma
Bissett, Dr. E. D. R.		Pine Falls, Ma
Brownlee, Dr. T. I.		Russell, Ma
Corbett, Dr. Connor A.		Crystal City, Ma
Crawford, Dr. C. S.		The Pas, Ma
Davidson, Dr. D. A.		Cartwright, Ma
Dick, Dr. C. J. W.		Hodgson, Ma
Edmison, Dr. J. N., Manitoba Sanatorium		Ninette, Ma
Fiddes, Dr. G. W. J.		Brandon, Ma
Findlay, Dr. J. A.		Brandon, Ma
Gendreau, Dr. L. P., Mental Hospital		Selkirk, Ma
Goldstein, Dr. P.		Benito, Ma
Harris, Dr. R. S.		Virden, Ma
Hawes, Dr. E. G.		Brandon, Ma
Hebert, Dr. J. L.		Lorette, Ma
Howden, Dr. W. A.		Neepawa, Ma
Hunt, Dr. D. W.		Whitemouth, Ma
Jacobs, Dr. A. L.		The Pas, Ma
Johannesson, Dr. T.		Gilbert Plains, Ma
Maclean, Dr. A. D.		Elkhorn, Ma
Lippmann, Dr. H. H.		Beausejour, Ma
Luginsky, Dr. S. M.		Beausejour, Ma
North, Dr. W. H. C.		Virden, Ma
Rabson, Dr. L. R., 27 Rothesay Apts., Winnipeg		73 39
Ritchie, Dr. W. G.		Dauphin, Ma
Sharpe, Dr. V. J. H.		Brandon, Ma
Sneath, Dr. I. W.		Pine Falls, Ma
Thomas, Dr. C. M.		Portage la Prairie, Ma
Varverikos, Dr. E. D.		Selkirk, Ma
Watkins, Dr. R. T.		Brandon, Ma
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College of Physicians and Surgeons of Manitoba

Council Meeting

Winnipeg, Man., May 15, 1946.

A special meeting of the Council of the College of Physicians and Surgeons of Manitoba was held Wednesday, May 15th, 1946, at 2.00 o'clock p.m., in the Medical College, Winnipeg.

The President, Dr. C. W. Wiebe, called the meeting to order.

The business of the meeting was as follows:

1. Roll Call.

The following members were present:

Dr. C. W. Wiebe, President	Dr. A. E. McGavin
Dr. A. A. Alford	Dr. J. S. Poole
Dr. B. D. Best	Dr. James Prendergast
Dr. I. H. Beckman	Dr. W. F. Stevenson
Dr. W. G. Campbell	Dr. C. B. Stewart
Dr. H. Bruce Chown	Dr. Wm. Turnbull
Dr. W. E. R. Coad	Dr. T. Digby Wheeler
Dr. H. O. McDiarmid	

Observance of Period of Silence in Memory of the Late Dr. N. G. Trimble

Dr. C. W. Wiebe reported that one of our members, Dr. N. G. Trimble, had deceased on November 21, 1945.

The Council stood in silence in his memory.

2. Reading of the Minutes and Their Approval.

The minutes of the Annual Meeting of the Council held October 17, 1945, were presented. Each member had previously received copies.

Motion:

Moved by Dr. T. Digby Wheeler, Seconded by Dr. W. E. R. Coad: "THAT the minutes of the Annual Meeting of the Council held October 17, 1945, be accepted as having been read." Carried.

Business Arising From the Minutes of the Council Meeting, October 17, 1945

(a) Consideration of the Report of the Education Committee.

Dr. W. G. Campbell reported that he had sent a copy of this report to the other Colleges of Physicians and Surgeons in Canada, and had received replies from nearly all of the Registrars, stating their views on the matter.

Motion:

Moved by Dr. C. B. Stewart, Seconded by Dr. I. H. Beckman: "THAT the report be referred back to the Education Committee, and that an amended report, after study of the correspondence from the other Colleges, be submitted at the Annual Meeting on October 16th, 1945." Carried.

(b) Report on the Resolutions sent to the Board of Governors of the University of Manitoba, re: Latin being made an Optional Subject in Primary and Premedical Training, and the

Committee on Admissions being informed in sufficient time of the information regarding Medical Students.

Dr. Campbell reported that he had not received a direct reply, but that he had seen in a report of the Medical Faculty of the University of Manitoba, that Latin had been made an optional subject in primary and premedical education. He also stated that he had received a reply from the Board of Governors stating that the Chairman of the Committee of Selection has been urged to take steps to provide the necessary information.

3. Reports of Officers and Their Consideration.

Not applicable at this meeting.

4. Reports of Standing Committees and Their Consideration.

(a) Report of the Executive Committee.

Dr. Wm. Turnbull, Chairman of the Executive Committee, reported that the members of the Council had received copies of the minutes of the Executive Meeting held February 28, 1946.

Motion:

Moved by Dr. Wm. Turnbull, Seconded by Dr. H. O. McDiarmid: "THAT the report of the Executive Committee Meeting held February 28, 1946, be accepted as having been read." Carried.

(b) Report of the Registration Committee.

Dr. W. G. Campbell, Chairman of the Registration Committee, reported that there had been several meetings of this Committee since the Annual Meeting of the Council in October, and that the members of the Council had received copies of them all.

Motion:

Moved by Dr. W. G. Campbell, Seconded by Dr. Wm. Turnbull: "THAT the reports of the Registration Committee meetings be accepted as having been read." Carried.

(c) Report of the Taxing Committee.

Dr. W. E. R. Coad, Chairman of the Taxing Committee, presented the following report:
To the College of Physicians and Surgeons of Manitoba:

I beg to report that since the last meeting two applications were made to the Taxing Committee for consideration and necessary action.

One case, a complaint against a medical practitioner because of an alleged overcharge. Before a meeting of the Taxing Committee could be called, the dispute was settled through the office of the Registrar, who acted as liaison between the parties concerned.

The second case, an alleged overcharge, was settled satisfactorily through the co-operative action between the Chairman of the Taxing Com-

mittee, and the office of the Registrar. No meeting was required.

Dr. W. E. R. Coad.

Motion:

Moved by Dr. W. E. R. Good, Seconded by Dr. H. O. McDiarmid: "THAT the report of the Taxing Committee be accepted." Carried.

5. Reports of Special Committees and Their Consideration.

(a) Report of the Committee of Twelve.

Dr. T. Digby Wheeler reported that this committee was now the Committee of Fifteen, as three members from Rural Manitoba had been added. He reported that the only matter for consideration was the bill to license natureopaths. Dr. R. W. Richardson had attended with our solicitors at the Legislature in regard to the Natureopathic Act, which was passed, and stated that it was hoped that this would be the last group to be brought before the Legislature for license, now that the Basic Science Act was in effect. Dr. Wheeler also stated that Dr. R. W. Richardson had been appointed Chairman of the Committee of Fifteen, and that Dr. C. E. Corrigan was appointed Secretary.

Motion:

Moved by Dr. T. Digby Wheeler, Seconded by Dr. W. E. R. Coad: "THAT the report of the Committee of Twelve be adopted." Carried.

(b) Report of the Representative to the University Senate.

Dr. W. E. R. Coad, the Council's representative to the University Senate, presented the following report:

To the College of Physicians and Surgeons of Manitoba:

I beg to report that the first review of the "Basic Sciences Bill" and attached appendix "A" before the Senate of the University of Manitoba, was held at a special meeting on January 21, 1946, and there were also present Dean H. P. Armes, Dr. F. W. Jackson, and later Dr. W. G. Campbell, registrar of the College of Physicians and Surgeons of Manitoba. The purpose of the meeting was announced by the Vice-Chancellor, Dr. A. W. Trueman, and requested action be taken under the "Basic Sciences Act." Long discussion ensued in which the Vice-Chancellor participated. Objections were many, in respect particularly to the number of hours of instruction in certain of the "basic sciences," specification of text books as definitely controlling the scope of study in certain subjects, etc., etc.

A motion was made, seconded and carried, that a Committee be appointed by the Senate, consisting of Dean Tallin, as Chairman, the Vice-Chancellor and Dean A. T. Mathers, with instructions to formulate its objections and consider a

revised form of regulations for the administration of the "Basic Sciences Act," and the committee to report at the next regular meeting or sooner if possible.

Dr. W. G. Campbell then addressed the meeting, urging that the Senate speed up the functioning of the "Basic Sciences Act," as many new graduates in medicine were clamoring for action, but the main reason was the fact that many areas in the Province were in dire need of medical assistance.

The next meeting (special) was held on January 31, when a report from the Committee, Dear Tallin (Chairman), was received and carefully scrutinized by the Senate. The revised report with additions was accepted, and gave instructions that the revised "Basic Sciences Bill" and its appendix "A" be forwarded to the Department of Health and Public Welfare.

At the regular monthly meeting of the Senate on February 7, 1946, the Vice-Chancellor reported while a copy of Order-in-Council in its amended form had not yet been received, he had been assured by both Minister and Deputy Minister of Health and Public Welfare, that the "Basic Sciences Act," in amended form, as recommended by the Senate, with one minor exception, had been read and passed, and only required the Lieutenant-Governor's signature.

On the basis of this report, a committee on the "Basic Sciences Act" was appointed with power to act for a period of five months, with the understanding that this committee report to the Senate for confirmation of its actions in each case, and that the powers of the committee shall be reviewed at the June meeting. Motion carried.

The personnel of the Committee on "Basic Sciences Act" are: Dean A. T. Mathers (Chairman), Prof. A. T. Cameron, Dr. H. D. Kitchen, Dr. W. E. R. Coad; Dean H. H. Saunderson, Prof. J. F. T. Young, the Registrar: Dr. W. J. Spence.

At the regular meeting of the Senate on March 7, 1946, the Senate was advised by the Chairman of the Committee of the "Basic Sciences Act," that the Act was functioning, and gave a synopsis of credentials and records reviewed, as well as a list of recent medical graduates as qualifying in every detail, to be issued with a Certificate of Credit. By arrangement within themselves, the Committee on "Basic Sciences Act" agreed to meet monthly two days before a regularly monthly Senate meeting, and report on any business transactions accomplished. Since then, these plans have been followed monthly with satisfaction.

In the year 1945 an Act called the "Basic Sciences Act" passed the Legislative Assembly of Manitoba on the 28th day of March, 1945, and was assented to by His Honor the Lieutenant-

Governor on the 7th day of April, 1945, effective on assent.

There are in the Province of Manitoba three branches of the healing art, namely: (1) The regular type as followed by us all. (2) The Chiropractic branch of healing art. (3) The Osteopathic branch of healing art.

These three licensing authorities are authorized, under an Act of the Legislature, to register any qualified person in a register for the purpose to issue a certificate of license to engage in or practice a branch of the healing art, and are also authorized to renew or reinstate any such registration or license that has lapsed or been cancelled, on condition that the applicant first produces to the licensing authority, a Certificate of Credit, stating that the applicant is qualified in the basic sciences, or instead, a certificate of like effect as may be provided by the Senate of the University.

It is to be noted that after January 1, 1946, each and all of these "licensing authorities" must not issue a license to practice any branch of the healing art, unless the application for license is accompanied by a Certificate of Credit under the Basic Sciences Act.

1. To obtain this "certificate of credit," the applicant must produce a certificate, diploma, or other evidence of qualification, satisfactory to the senate of the University of Manitoba, showing that the applicant is qualified in the Basic Sciences to the extent prescribed in the regulations issued or furnished by the University or a College or University deemed by the Senate to have an equivalent standing or

2. By passing, with the number of marks required by the Senate, an examination, set by the University of Manitoba in basic sciences to the extent prescribed in the regulations.

The extent to which persons to whom a certificate of credit is issued under the "Basic Sciences Act" shall be required to be qualified in or to be examined in the basic sciences are set out below, and half the time allotted for instruction assigned to each science shall be devoted to practical instruction, as required by the Senate of the University of Manitoba.

The following are the Basic Sciences and hours of instruction:

	Hours
Anatomy—Not less than _____	216
(Of which 165 hours shall be devoted to Microscopic Anatomy, i.e., Histology and Embryology)	
Biochemistry—Not less than _____	216
Physiology—Not less than _____	300
Bacteriology—Not less than _____	120
Pathology—Not less than _____	200

Hygiene—Not less than _____	96
	1,148

Text books recommended for use are mentioned after each basic science.

A. This Act (Bill 63-1945) does not apply to registration made or to certificate or license, issued pursuant to: The Chiropodists Act; The Manitoba Optometry Act; An Act respecting "The Manitoba Association of Registered Nurses"; or the Licensed Practical Nurses Act.

B. This Act shall not apply:

(1) To the registration of or to the issue of a certificate or license to any person pursuant to the Chiropractic Act where a person has, during any one year prior to January 1, 1945, practiced in Manitoba as a Chiropractor is entitled to be registered.

(2) To the registration of or to the issue of a certificate or license to any person pursuant to the Osteopathic Act where a person has during any one year prior to January 1, 1944, practiced in Manitoba as an Osteopath is entitled to be registered.

(3) To the registration of or to the issue of a certificate or license to any person other than a person mentioned in (1) and (2) above, where the registration or issue is made prior to the first day of January, 1946.

The Basic Science Act does not apply to:

1. Persons treating human ailments by prayer or spiritual means as an enjoyment or exercise of religious freedom.

Penalty

8. A licensing authority that contravenes any provision of this Act is guilty of an offence and shall be liable to summary conviction, if a corporation to a fine not greater than \$1,000.00, or if an individual to a fine not exceeding \$200.00, or imprisonment for not longer than two months or to fine and imprisonment.

9. No person shall practice the healing art in Manitoba for fee, gift, hire, compensation or hope of reward unless he holds a valid and subsisting certificate of credit granted under this Act. This section does not apply to persons coming under provisions of sections 6 and 7.

Dr. W. E. R. Coad.

Motion:

Moved by Dr. W. E. R. Coad, Seconded by Dr. H. Bruce Chown: "THAT the report of the representative to the University Senate be adopted." Carried.

6. Election of Officers and Standing Committees.

Not applicable at this meeting.

7. Reading of Communications, Petitions, Etc., to the Council.

(a) Communication from the Canadian Red Cross Society.

A communication from the Canadian Red Cross Society, dated February 15th, 1946, was presented.

Motion:

Moved by Dr. T. Digby Wheeler, Seconded by Dr. H. O. McDiarmid: "THAT the letter be filed." Carried.

8. Enquiries. None.

9. Notice of Motion. None.

10. Motions of which notice has been given at previous meetings. None.

11. Unfinished Business from Previous Meetings. None.

12. Miscellaneous and New Business.

(a) **Consulting or Working with the Licensed Chiropractors, Osteopaths, Etc.**

Dr. Campbell reported that it had been brought to his attention by a radiologist that a chiropractor had sent a patient for a gastro-intestinal examination, and that the radiologist had asked whether he should give the report to the chiropractor. The radiologist was not aware until after the X-ray plates were taken that he was dealing with a chiropractor. Dr. Campbell had given his personal advice that he should render the report, and that the question of such conditions would be brought before the May meeting of the Council. Dr. Campbell asked the Council for its opinion and advice for guidance when any other such cases arose.

Dr. T. Digby Wheeler stated that if any cases come into his office from chiropractors, the plates are kept, and the reports are sent to the patient. The patients are treated just as though they were not referred by anyone, but just came on their own.

Dr. H. Bruce Chown said that he could not see why chiropractors, etc., should not receive such reports. He thought that by giving them X-ray reports, etc., that they might possibly learn something from them. He also said that sooner or later they will be wanting to get into the hospitals, and something will have to be done regarding this.

Dr. J. S. Poole and Dr. B. D. Best both stated very emphatically that registered doctors should have absolutely nothing to do with them.

Dr. H. O. McDiarmid stated several cases where chiropractors had treated patients, and if they had been treated by qualified physicians, they would

have lived, or would have been better than they were.

The Council as a whole considered that it would be unethical for registered practitioners to collaborate with chiropractors, chiropodists, osteopaths, etc.

(b) **Legal Control of Who Shall Issue Radium Its Emanations for Therapeutic Purposes.**

Dr. Campbell reported that a company called The Radium Luminous Industries Limited, 10 Church Street, Toronto, had opened an office in Winnipeg for the purpose of selling radium apparently to anyone who had the money to buy it. He also stated that the Manitoba Cancer Relief and Research Institute had a list of doctors whom they considered were qualified to use radium in the Province of Manitoba, and sold it only to those on that list.

Motion:

Moved by Dr. H. Bruce Chown, Seconded by Dr. B. D. Best: "THAT the Registrar be instructed to write to the Dominion Department of Health stating that the use of radium be confined in Manitoba to those doctors whose names were on the list approved by the Manitoba Cancer Relief and Research Institute." Carried.

(c) **Discussion on Co-operative Meetings of the Presidents and Registrars towards Uniformity of Medical Acts of the Various Provinces, and the study of any Proposed Legislation Affecting Medical Practitioners, Especially Relating to Social Medicine.**

Motion:

Moved by Dr. T. Digby Wheeler, Seconded by Dr. H. Bruce Chown: "THAT the Registrars be instructed to communicate with the other registrars to meet at Banff, and if the meeting does take place, this Council will defray the expenses of the Registrar." Carried.

Re: Payment of the Janitor

Motion:

Moved by Dr. T. Digby Wheeler, Seconded by Dr. W. E. R. Coad: "THAT the Janitor be paid Five Dollars (\$5.00) for his services." Carried.

Adjournment

The meeting then adjourned.

